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The ARCHITECT

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On the Value of Association.

THE publication of an interesting and carefully compiled book on the Mansion House by Mr. Sydney Perks raises some thoughts on the value of association in matters appertaining to building and architecture. It is clear that there are two definite and opposed stand-points in the matter: the first that the permanent retention of old buildings should be justified by their usefulness for present-day needs or their marked architectural excellence, the second that buildings which are no longer useful or of marked architectural quality should often be retained if they are associated with great events belonging to the past and are, so to speak, landmarks in the history of a people.

We admit at the outset that there are some few buildings which almost everyone would agree should be retained irrespective of their merits or usefulness. In this category we should place Independence Hall in Philadelphia, which marks the decisive act from which a great nation dates its independent existence, as well as our greatest churches and such a site as the historic field of Runnymede; but beyond these there are many buildings and sites which belong to the larger intermediate field which forms the subject of dispute between antiquarians and others.

Mr. Perks condemns Wren's plan for the rebuilding of London because it would have entailed enormous expenditure in making roads over new ground, but also because the old ward boundaries would have disappeared, and such buildings as the Guildhall and many of the churches would have had to be erected on new sites, while Roman and other old foundations would have disappeared.

The first argument is one which has great practical weight, though it may be pointed out that were it considered as dominant the arrangement of no town could be improved, save in minor details, and the haphazard building of our forefathers would hold whole towns in chains. Mr. Perks has never seemed to us to be fair to Wren, who, if he had been entrusted with the "lay-out" of a new city, would probably have incorporated old street lines into his plan, radically altering them only when great advantages could be obtained by doing so. Old London was narrow, tortuous, and insanitary, disadvantages partly swept away by rebuilding on sounder lines; but many modern street improvements now made at enormous cost, or only possible in the distant future, might have been obviated had not narrower counsels prevailed. The differences between the "Warrant Design" and St. Paul's as executed are probably less and not greater in character than the differences between Wren's plan of London and what he would have actually carried out had he laid down the lines for London after the Great Fire.

As to Roman and mediæval remains, it must be pointed out that the value of "antiquarian finds" is a new cult, and in the great building ages of our history there was no disposition to retain anything merely for

the sake of historical association. How strong that sentiment now is may be gauged from the efforts made to retain the arch of old London Bridge recently, though such retention is only possible by either leaving it in the basement of a modern building or by transporting it stone by stone for erection elsewhere. In the absence of any marked architectural value such antiquarianism seems to us to be absurd, but it is indicative of the hold of an idea on many and of radical difference in the mental attitude of different sections of the public.

When we come to such questions as the retention of buildings like the Mansion House or of the Bank of England, it seems to us that we have good reason to consider the profit and loss involved. Dance's Mansion House, though a creditable design of a somewhat commonplace character, does not seem worth retaining on a valuable site which can be more effectively utilised. Its planning is that of the epoch to which it belongs, and could be much improved upon, especially in practical details. Planning which was reasonable enough a century ago is completely out of court now that the enormous increase in the value of City sites has occurred. Soane's Bank of England, again, is an interesting work of its period, but has even greater practical defects, because an immense area is covered by low buildings. Both the Bank and the Mansion House are buildings which, like a great part of lower New York, are marked out for rebuilding; nor are either of them structures which might not easily be surpassed in convenience and beauty by the work of the best architectural designers of the day. We would go even further and say that the competition for the Soane Medallion has frequently produced work of far higher merit than either, though that competition is one for architectural students and not for practising architects.

The question of the retention of some of the City churches introduces another element which complicates the whole matter. If it be held, as many say, that a church, once consecrated, should not be used for any other purpose, or its site occupied by another building, the question need not be argued. But if not, the two elements of gain and loss are again the factors which ought to be balanced. Something like half of the nineteen churches scheduled are hardly worth retaining on the ground of architectural merit, while their sites are very valuable and the Church needs more revenue. Should association prevent such alienation or should other reasons prevail? We believe that in the case of historical buildings possessing associations some mean course might be adopted. If we sanction the demolition of what has been held of value in the past, might we not ask that some competent authority should have a voice in the choice of what is built in its stead, so that the architectural interest of our towns is not diminished? Thus, if we were deprived of St. Mary Woolnoth, and in its place had a building possessing the architectural interest and merit of the Institute of

Chartered Accountants, can it seriously be maintained that the architectural amenities and interest of the City would have suffered? But, on the other hand, if we had a building of a commonplace or vulgar commercial character, we should have suffered a loss.

Mr. Perks holds that by the adoption of Wren's plan the old ward boundaries would have been obliterated; but what value other than that of association do such boundaries possess unless they arise out of practical requirements? Some of our English counties and many Scotch ones have islands of territory surrounded by other counties. Thus Dudley is in a portion of Worcestershire surrounded by Staffordshire. We do not know, but should surmise that these survivals cause trouble and expense when questions of police and administration are concerned. If so, we do not see that a readjustment of boundaries would be unreasonable, even though it would obliterate old

association. Kensal Green was for many years a part of the borough of Chelsea, from which it was separated by other districts. Are such anomalies worth retention or not? The lower end of Chancery Lane is in the City of London, but would there be any reasonable objection to transferring it to the City of Westminster if practical advantages were obtained, and if some equal rateable area elsewhere were transferred to the City of London? If France and Belgium were able to come to an arrangement, as they did some years ago, for the transfers of border territories for greater convenience of administration, though in that case the question of nationality was involved, was not Wren justified in considering that the maintenance of the division lines between the wards of the old City of London was immaterial? We ask these questions because the whole subject is one of great interest in view of the divisions of opinion which exist.

Our Illustrations.

Drawings made by GEORGE BASEVI on "THE GRAND TOUR."
R.A.F. MEMORIAL. SIR REGINALD BLOMFIELD, R.A., Architect.
RAMSGATE: EAST CLIFF GARDENS. SIR JOHN BURNET, A.R.A., and PARTNERS, Architects.
TWO HOUSES AT WESTMINSTER. BRIANT A. BOULTER, Architect.

Notes and Comments.

The New County Hall.

The new County Hall is condemned by an "Architectural Student," writing to the "Evening News," on somewhat curious grounds. Looking at it from Westminster Bridge the whole mass is said to look "flat and low, a mixture of architectural styles, lacking in harmony and in unity." We are surprised to hear that "too much is seen of high-pitched roofs with ugly red tiles." The writer of these criticisms surely forgets that the height and width of a building are mainly governed by practical considerations from which no architect can escape. We are told that no man can add a cubit to his stature and, similarly, we may say that no architect can add an unnecessary ten feet to the height of a great building without coming to an agreement with his clients. Might we not say that both Greenwich and Chelsea Hospitals were also flat and low, though it is true the former is not covered with "ugly red tiles," a comment which reminds one of Sir William Chambers's advice to architects to avoid tiles because of their "coarse and ugly colour." We also fail to detect the mixture in styles, but the same criticism would probably apply to Shaw's New Scotland Yard. Defects must exist in all buildings, and we feel inclined to regret the great semi-circular recess in the centre of the front, but here many would not agree with us. In all probability we should find that the "Architectural Student" is a person of somewhat narrow views who cannot understand or sympathise with a design which belongs to a freer type than that which meets with his approbation.

The Rome Scholarship and the Liverpool School.

The Rome Scholarship in Architecture has for a third time been awarded to a student of the Liverpool School of Architecture in the person of Mr. Stephen Welsh, who has also gained the distinction of Bachelor of Architecture with Honours in Liverpool University.

In 1920 the first, second, and third places were gained by Liverpool students. This year, out of nine competitors ultimately selected by the Faculty, eight were from the Liverpool school and one from Manchester. Out of the candidates allowed by the Faculty to enter the preliminary stage of the present competition—these candidates included students of architectural schools in London, Glasgow, Leeds, Toronto, and other centres—only 14 survived the second part of the preliminary test, or approximately half the number admitted to it.

Besides the Rome Scholarship in Architecture, another prize may be awarded to the author of the design considered

by the Faculty to be next in merit to that for which the Rome Scholarship is given—and this is known as the Henry Jarvis Studentship and is of the value of £250 per annum, and is ordinarily tenable at the British School at Rome for two years.

This second prize, next in importance in the architectural world to the Rome itself, has also been won this year by a student of the Liverpool University School of Architecture, Mr. G. Checkley. He, like Mr. Welsh, is a fifth-year student, taking the course for the degree of Bachelor of Architecture with Honours in Architectural Design.

The remarkable success of students of the Liverpool School in connection with these great prizes probably points to the special nature of the tuition given there, as otherwise we should be inclined to say that the standard of excellence attained by students of the Architectural Association School is quite equal to that of their colleagues in Liverpool. Is it that the Liverpool training is more "continental" in its character than that given at the Association?

An Addition to the Zoological Gardens.

A plan has been given in "The Times" of an interesting addition which it is proposed to make to the Zoological Gardens by the formation of a crescent-shaped tank 400 feet in length with a gallery along one side. The larger and more important tanks on the outer, or north, side of the curve will have daylight illumination with provision for electric lighting on dark days and in the evening. The smaller tanks, on the inner side of the curve, will have electric light always, an arrangement that has been found entirely satisfactory in the very fine aquarium erected in the Berlin Zoo shortly before the war. The entrance, at the east end, near the main gate to the gardens and the new tunnel, leads into a small lobby with a large rock-pool for trout and access to rooms for the curator and his staff and to a small research laboratory. Then comes the Fresh-Water Hall, 150 feet long by thirty wide, with twenty-six show tanks, ranging from thirty-one feet to six feet in length. The bottom, sides, and, in some cases, the backs of the tanks, are in slate; the front is in polished English plate-glass. The lighting will be of the aquarium type, coming through the water from above and behind, the hall being in relative darkness. The Sea-Water Hall is approximately the same length, but considerably wider, and contains twenty-one exhibition tanks, ranging from thirty-one feet long to six feet long, including a pool for young seals and a surface pool such as is seen on a rocky coast at low tide. The details of the tanks are similar to those in the Fresh-Water Hall.

Still further to the west, and shut off by doors, lies the Tropical Hall, containing forty-nine tanks, from ten feet to one foot six in length. Lastly, there is a smaller room with a tank for diving birds and an exit hall. Service passages, not open to the public, run at the back of all the tanks.

This should form a great attraction to visitors, but we should be interested to learn what architect is to be employed. We believe that Mr. Belcher was formerly architect to the Society.

Traffic Dangers.

In the warm advocacy of wide streets of which we hear so much it is sometimes forgotten that streets may be dangerously wide and open spaces may be excessive, even from the point of view of traffic. An instance of this may be found in the wide street spaces which intervene between Westminster Abbey, the Houses of Parliament, and Westminster Bridge. We know of no area in London where roadways and islands are so abundant but where the pedestrian has to exercise greater care in crossing roads. It is true that the great open space at this point is pleasant, but it seems to us that the whole area is badly in need of re-planning and that the adoption of some form of a great ring road at this point with an open space in the centre is urgently needed for the regulation of traffic and the protection of pedestrians. We know of many congested centres of traffic which are far safer because, though care must be exercised, the direction from which danger may come is far more apparent and easily realised. In addition, the present medley of roads, islands and short cuts is extremely unsightly, and should yield to careful and practical planning.

St. Paul's and its Needs.

Canon Alexander appeals for £100,000 to continue the necessary works of reparation in connection with the dome of St. Paul's, as the funds in hand are practically exhausted. In view of the great difficulty of raising such a sum at the present time would it not be possible for those who have opposed the demolition of more City churches to reconsider their attitude with respect to some of them? For instance,

if St. Clement's, Eastcheap, were demolished and its site sold it is probable that the money so acquired would suffice to carry out the necessary works at St. Paul's, and we believe a visit to the church in question would convince the most ardent of antiquarians that there is little advantage in retaining it. Our case is similar to that of some estate, money for the maintenance of which is difficult to find, when by the sale of an outlying farm funds can be provided for the upkeep and maintenance of the main estate. It is true that many will contribute to a fund for the upkeep of St. Paul's, but we must bear in mind that elsewhere, as at York Minster, there is similar need for funds, and that everyone cannot contribute every time to all causes, however worthy they may be of our support.

The Stones of Reims.

The Société des Amis de la Cathédrale de Reims is engaged in collecting the fragments of broken sculptured remains of the Cathedral with a view to their restoration to their original positions in the Cathedral. It is claimed that many of these fragments are in foreign countries and the authorities hope will be sent back by those who have purchased or discovered them. It is not proposed to carry out restoration by completing missing parts, but by simply fixing in their places fragments which it is claimed can in almost all cases be identified as belonging to various positions. It is calculated that the work of restoration will be spread over thirty years, as it is considered advisable that it should all be carried out under the personal supervision of those directing the work and should not be the product of the efforts of several *ateliers* working concurrently.

An early commencement is to be made with the erection of 250 houses at Carcroft, near Doncaster, and nearly 300 more at Highfields and Woodlands. The cost is being met by a colliery syndicate, and the idea is to house some of the employees of Brodsworth and Bullcroft Mains, both of which are rapidly developing.

New Books.

"A History of Architecture on the Comparative Method." By Sir Banister Fletcher. Messrs. Batsford, Ltd. Price £2 2s. net.

The sixth edition of this well-known history will no doubt be found to be useful to students, as in the past, as well as to those who want an encyclopædia of architectural facts and dates. Its function and scope is quite unlike the histories of Ferguson and in later times of H. H. Statham. Both of these writers discuss architecture analytically and critically, while the function of Sir Banister Fletcher's work is more that of an encyclopædia to which we refer for recorded facts. The numerous illustrations are often very small in scale, but this is unavoidable where, as in this case, it is necessary to cover a very wide field, which can only be slightly touched on in the compass of a single volume.

Such defects as it possesses are inseparable from a work of its scope, and it remains what it always has been, a monument of painstaking compilation rather than an effort of critical thought.

"Building Contracts." By Edwin J. Evans. London: Chapman & Hall, Ltd. 10s. 6d. net.

The title of this book does not adequately express the scope covered by the text, as the author deals with the administration of contracts, general and office management, and book-keeping as applied to a contractor's business, with the addition of memoranda and plant lists useful to the builder. The Foreword has been written by Sir Charles Ruthen, and in the course of this he states that the building industry in pre-war days was the third largest in the British Isles and to-day it has a great field of labour in front of it necessitating business methods to attain the

importance it previously held. These remarks are quite true, and any treatise which will assist in educating those engaged in the contracting business in up-to-date and sound organisation is a welcome addition to our technical literature. The author deals with the various types of contract adopted from time to time, but no mention is made of the contract often used in America, wherein the contractor is paid the actual cost plus a *fixed* lump sum as profit as distinct from the profit based on a percentage of the cost. This contract has some advantages, because the contractor has no inducement to create extras which increase the cost, but has every inducement to get the work executed quickly and become entitled to receive final payment. A chapter is devoted to the architect, and advice is given for the benefit of contractors as to the best way of dealing with this gentleman, and we found this rather amusing in parts. It is impossible to even briefly deal with the whole of the matter in the seventy chapters comprising the volume, but it can be generally stated that a mass of useful information is given. The memoranda for contractors is particularly useful, as it contains notes that will be constantly referred to when ordering materials or making out accounts. In a few instances the author might with advantage have added some information on the most modern methods, as, for example, in the chapter on transport the details are given for horse-drawn vehicles, but steam-driven lorries are neglected, and in the excavating chapter steam shovels are ignored, and other similar items could be mentioned.

The book can, however, be thoroughly recommended as an excellent effort to deal with the difficult subject of building contracts.

London Art Galleries.

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A very delightful exhibition of drawings of sport and old English inns is now being held at the Grafton Galleries, in Grafton Street, the artist being the well-known illustrator, Cecil Aldin. Mr. Aldin is an excellent animal painter, as we see here in his portrait of horses, cows and dogs. "Nonie," an Aberdeen terrier, deserves to be perpetuated in art, for she is a veteran hero of the Jutland Battle, of Flanders battles, and has been among the clouds in an aeroplane. "Quality" is a magnificent chestnut thoroughbred, in colour and form very like one or two of the competitors for the Connaught Cup in last week's International Horse Show; and "Vain Lucy" is a magnificent shorthorn cow, looking fully conscious of her attractions. "She is not a common or garden cow," said the artist last week. "She is a veritable Venus among cows. . . As a sitter Lucy was ideal. For hours at a time she would stand chewing the cud (whatever that may be—the cowman told me that was what she was doing), and all the time gazing at me with those great liquid eyes of hers which most women would give their souls to possess." And the artist added, in the amusing interview which appeared in "The Star" of last week: "Why should not a stud book cow have her portrait painted? It is fashionable to have your Derby winner's portrait painted (when you have one). Why not your pride-of-the-dairy cow? We are terrible creatures of custom."

But his animal studies and his sporting subjects, which include some clever coaching and steeplechase scenes—"The Dusty Road," "The Open Ditch," "The Water Jump"—are by no means the only feature of interest here; and I wish to call special attention to the really excellent series of drawings (in pastel, like all the drawings shown here) of old English inns. Mr. Aldin seems to have a special predilection for old timbered buildings, such as we in Worcestershire can still happily show numbers of, and as a matter of fact nearly all the inns shown here possess this most attractive feature. I may instance "The Bell Inn, Hurley, Oxon"; "The Star Inn, Alfriston"; "The King's Arms, Ombersley, Worcestershire"—a village which is rich in timbered houses, or was so when I knew it; "The Bear's Head Inn, Brereton, Cheshire"; "The Bell Inn, Tewkesbury," and more than a dozen others. Sometimes, instead of the outside, the artist selects a view of the interior, such as that of "The New Inn, Gloucester," or the finely-characteristic inner courtyard of "The George Inn, Norton St. Philip," and throughout in these he shows thoroughly sound architectural drawing and perspective. The colour is, with advantage, suggested and held generally in reserve; where it is brought out more fully, as in "The George Inn, Salisbury," I feel the result as less satisfactory. These old timbered inns, some of which were slowly decaying before the revival of road traffic gave them the lift they badly needed, are part of our artistic heritage, which should be studied and treasured; it is from this point of view that these drawings of Cecil Aldin, besides being charming studies, have very considerable value.

At the Fine Art Society, a little further up Bond Street, two exhibitions of landscape in oil colour opened last week, the artists being Harold Speed and Tom Mostyn. This latter has limited his subject to "Glorious Devon," and gives us thirty delightful paintings, more reserved and less daring in colour schemes than much of his work, but none the less attractive. There are two studies of "Ansty's Cove," one of which, with misty depths of blue in sea and sky, seems to present rather a glorified vision of that beauty spot of South Devon; but Widdicombe Moor gives the cold grey moorland under less favourable weather conditions, and there is a delightful nocturne of Torquay; while among others I should select Clovelly, and for painting "Black Pool Sands" and "Dartmeet." In the next room are Harold Speed's landscapes in oil colour, in which the artist, in such subjects as "The Meeting of the Waters," "The Fairy Pool," "Trent Stream" and "A Cool Shade," is very successful in his rendering of cool, shady streams,

half-hidden by rocks and foliage. His treatment of massed clouds is to be noticed in "Shower-Bay of Naples," "Clouds near Athens," and clouds in twilight over moorland in "Storm Clearing"; but one of the most attractive works shown is a study of "The Parthenon" by moonlight, the Doric columns emergent against the blue-black sky where one lone star gleams, a really inspired treatment in which the two gas or electric lights below seem out of the harmony. Charles Wills is showing in the inner room some plaster "figurines," in which "The Belle," "The Beau," and "Mrs. Elliott" seem inspired by the seventeenth or eighteenth century. Other small figures, such as "Dread," "Virginity," etc., seem to offer suggestions for fuller treatment. If among these last "Aspirations" seems somewhat incoherent, it is perhaps true to what these are too often in reality.

The Summer Exhibition of the Grosvenor Gallery, which is now open, and will continue through the season, is excellent in selection and hanging. There are not too many pictures, and many of them are good ones. I would mention particularly in the large gallery Harold Knight's "In the Studio," which I consider one of the best things he has done; John Sargent's wonderful "Fountain at Bologna" (lent by Sir Philip Sassoon), with its reflections on the wet bronze and gleaming lights; Gerald Kelly's "Mrs. George Philippi, and two very characteristic portrait studies, "Jim" and "Edwyn," of a youth and boy, by Augustus John, on either side of the legendary combat of Saint George and the Dragon, by Charles Ricketts. Vivian Forbes has a still-life in this room, well handled, but not on the level of Isabel Codrington's "Still Life" in the next room. In this last a collection of vegetables, cabbages, onions, etc., useful, but scarcely attractive in themselves, is handled with almost the mastery of Pieter Claesz. Van Beyeren, or one of the Dutchmen whom I have lately had the opportunity of studying at the Hague Museum; and is an evidence of this artist's fine and (I incline to think) constantly-improving technique. Among figure-subjects I noticed Oswald Birley's lady with a "Green Mask," next to the delightful riverside figure of "Midsummer Morning," by Algernon Talmage; in the corner gallery Clara Kilinghoffer's "Study of a Girl" surpasses even the Dutchmen in its opulence of fleshy form; and Colin Giff's ambitious "Allegory"—a study for the central figure of which is in the corridor near Russell Flint's water-colour drawing of "The Olympian"—may have some deeper meaning, but on the outside suggests only a kind of "Bacchanal" of some very evil-looking gypsies. In the sculpture I noticed the bronzes—"La Flandre" and others—by Pittendrigh Macgillivray, and a portrait-bust by Epstein.

The Twenty-One Gallery opened last week an exhibition of water-colour drawings and woodcuts by Thomas Derrick, supplemented by etchings and lithographs by L. Raven Hill, F. L. Griggs, Frank Brangwyn and others. Thomas Derrick is at his best in his set of designs for G. K. Chesterton's "Magic," seven drawings in all. Among the illustrations in colour and line to Boccaccio's "Decameron" one of the best is his "Prologue—The Storytellers," sitting in an Italian garden guarded by monumental cypresses, with Florence in the distance, though from my recollection of dates Brunelleschi's dome seems here a little previous.

In the Little Art Rooms, in Duke Street, Adelphi, Powys Evans has a clever display of caricatures, which include, with many well-known people among whom I noticed John Masefield, Sybil Thorndike and D. S. MacColl, a set of caricatures in line and colour of the leading characters in the recent successful revival of "The Beggar's Opera."

S. B.

Lord Leverhulme is reported to have offered £20,000 towards the erection of a new building for the School of Architecture at Liverpool University.

The Grand Tour of an Architect.—I.

By W. H. F. Basevi.

(See Inset Illustrations.)



GEORGE BASEVI, FROM A PLASTER CAST IN THE FITZWILLIAM MUSEUM, CAMBRIDGE.
The original bust was by Stanetti.

THE close of the Napoleonic wars opened the continent of Europe to Englishmen. For nearly thirty years, except for brief intervals, it had been a forbidden land known only to the soldiers who fought in Spain and France under Wellington, and vaguely remembered by the older generation who had done "the grand tour" in their youth before the outbreak of the French Revolution. But with the return of peace came the opportunity of the younger men, who rushed abroad to see with their own eyes what their fathers had described.

Among the crowd of sightseers, in the year 1815, was George Basevi, a pupil of the distinguished architect Sir John Soane, who, in company with his brother, crossed the Channel and spent a brief holiday in Paris. This short visit proved to be a determining point in his career; for at that time the museums and art galleries of Paris were filled with the plunder of foreign countries, with pictures and sculpture which Napoleon had looted from conquered cities to adorn the capital of France. It was thus that Basevi gained his first close acquaintance with the art of Italy, ancient and modern, and was inspired with the idea of going to study the higher branches of his profession in Rome instead of remaining a pupil of Soane's. He had already worked for about five years under that accomplished master, and was well grounded in the technique of his profession; but, as he said later, "had I stayed on with Mr. Soane I might have learned to see with his eyes instead of with my own."

With the approval of his father the plan was put into execution in the following summer; and for the next three years he lived in Italy, for the most part in Rome, but not omitting to visit other cities where remains of Roman grandeur were to be found. The tour extended also to Greece, where he spent a few months full of interest and

instruction; and during the whole period he wrote home long letters to his parents and sisters. It is these letters which will provide the material for the following articles.

For the most part they consist of ephemera and trivialities, like intimate conversation between close relations, the natural unrestrained talk of a devoted son and brother, who scribbles without any pretence to literary finish just what comes into his head, confident that it will be welcomed with affectionate understanding. Indeed, he expressly stipulates that they shall not be shown to "my uncle D'Israeli," whose critical judgment he respects and fears. "If I cannot depend on this, half my pleasure in writing to you is lost, for I shall be obliged to study what I write."

Descriptions of the scenery and of the towns he visited naturally find a place in a traveller's letters; but these things have been done better by more skilful writers. Here and there, however, are passages of more general interest, such as brief accounts of prominent persons with whom he came in contact; while of more importance still to those who seek to understand the development of an artist's nature are passages of self-revelation which show how he reacted to the masterpieces of ancient art which were the objects of his daily study, and how, gradually, his eyes were opened so that he could distinguish good from evil.

Although he died too young to make a great name for himself—for Architecture is an exacting mistress who bestows her highest favours on those who have worshipped longest at her shrine—yet there was one noticeable feature in his career, which was that he was able to enter upon the practice of his profession at an age when most architects are struggling in obscurity, and suffering the depression of spirit which results from hope too long deferred. This early success was the consequence of his studies in Greece and Rome; but before entering upon those eventful years it will not be out of place to describe briefly what was the result of them.

To the younger generation of the present day George Basevi is a name vaguely connected with the FitzWilliam Museum at Cambridge, with Belgrave Square in London, and with Ely Cathedral where he met his death. If they know more, it is that he was a pupil of Sir John Soane, and a collaborator with Mr. Sidney Smirke in the design of the Carlton and Conservative Clubs in Pall Mall and St. James's Street. Born on April 1, 1794, he was the son of George Basevi (of 8 Montague Street, Russell Square, London, and Brunswick Square, Brighton), whose sister Maria married Isaac D'Israeli, and was mother of Benjamin Disraeli, Earl of Beaconsfield. From 1811 till 1816, when his foreign tour began, he studied under Sir John Soane; and about eighteen months after his return from Italy he was appointed surveyor to the Guardian Assurance Company upon its formation in 1821. About the same time he was engaged in building St. Thomas's Church at Stockport, and St. Mary's at Greenwich, both in the Roman style of architecture, and afterwards churches at Twickenham, Brompton, and Hove. Between 1825 and 1840 he designed and superintended the building of Belgrave Square (except the houses at the angles), which was the great building speculation of that day undertaken by Messrs. W. and G. Holdimand. Other works of his include the Elizabethan Hall at Brighton, St. Mary's Hall at Hove, St. Saviour's and St. Jude's churches in Chelsea, both in the Gothic style, Pelham Crescent, Sydney Place, part of Brompton Crescent, and Thurloe Square. The FitzWilliam Museum at Cambridge, his best known work, was begun in 1837; and in 1843, in collaboration with Mr. Sidney Smirke, he built the Conservative Club in St. James's Street, the ground floor of which is exclusively from Basevi's designs. The success of this building induced the members of the Carlton Club to confide to the same architects the task of rebuilding their house in Pall Mall.

Besides these works he built various other public buildings and a number of private houses throughout the country; and on October 16, 1845, at the age of fifty-one, while superintending repairs to the western tower of Ely Cathedral, he fell and was killed. His remains were buried in Bishop Alcock's Chapel at the east end of the cathedral. He married Frances Agneta Biscoe, and left a large family.

A list of his works will be found in the Architectural Publication Society's Dictionary, 1853.

It was in the last week of August 1816 that he started on his great enterprise. Travelling was slow, costly, and most uncomfortable. "It is," he says, "much more than a month's journey from London to Rome. A person must have fine weather, and must never stop on the road, to arrive there in so short a time."

But the risk of the undertaking lay in its novelty. For a young and ambitious student of architecture to leave his teacher and go abroad to study his art directly from the models of antiquity was regarded then as sheer audacity; and he himself was not unconscious that in breaking with established custom he incurred heavy risk of failure. Writing to his parents on the night of his arrival in Paris, he says: "I am in the midst of an immense forest. Out of numerous dark avenues that lead from the centre I am in, but one leads to light. That I may follow this is, I know, the prayer of you both." The nature of a true artist is evident in the opening words of this extract, for even his emotion appears to him in a visible picture.

The few days spent in Paris were occupied with sight-seeing and social pleasures. "I have seen," he writes, "a thousand things that I missed last year, several palaces, &c., and I am now of Mr. Soane's opinion that the French are at least a century before us in internal decoration."

Under the new dynasty efforts were being made to obliterate all traces of Napoleon's reign, though apparently not always with success. In the palace of Versailles, for example, he describes how "on entering one of the rooms I observed the head of Buonaparte in the ceiling, placed on the shoulders of Augustus. It has not been discovered by the police yet, or it certainly would have been erased. For they are extremely busy in rooting out all remains of him, which prevents our seeing many buildings where the N and bees had served as ornaments."

But though Napoleon was unpopular, his conquerors were not less so. "The English are very much disliked here, except in the families where they are known. The name of an Englishman is no longer a pass to all the lions, but rather a disadvantage. I tried to bribe one of the guards of the Louvre to let me see the paintings. 'No,' said he, 'it is your country which, by taking away the other paintings, obliged us to fill up the gallery anew, and it will not be open to you these two months.'" This refers, of course, to the compulsory restoration of the spoils of war to the countries from which they had been taken.

After seeing the celebrated actor Talma in "Hamlet," he continued his journey, travelling by Dijon, Lausanne, and Geneva. He entered Italy by way of the Mont Cenis pass. "In order to have a better view of the scenery, I had for the last two days mounted myself on the top of the *diligence*, and though the mornings were most bitter cold I was more than repaid this trifling inconvenience by the majestic grandeur of the surrounding mountains. I wished to sketch every moment, and believe, had I had my way, I should have been still among the Alps."

From Milan he writes: "In the Church Della Grato there is a fresco painting of the Last Supper by Leonardo da Vinci. I was seated before it nearly an hour, and could have stayed much longer, but the patience and admiration of my companion was exhausted. There is but one row of ancient columns in this city, and the barbarians are going to take them away to form a new street. I consider myself happy in having seen them, and examined them well, before they put their design into execution. As I advance I plainly perceive the model on which Mr. Soane has formed his architecture."

The same interest which he displays in the da Vinci fresco will be noticed throughout his letters whenever he is brought into contact with any form of art; and,

later on, he expresses his conviction that an architect should possess an intimate knowledge and understanding of paintings.

The beginning of October finds him at Florence, where he received so much hospitality and found the social life so agreeable that he forgot his determination to hasten on to Rome, and delayed his journey for a month. But his time was by no means wholly occupied by social pleasures. "I still continue to spend my mornings in the gallery. My eyes are beginning to open, and I now begin to feel the precept of Vitruvius that an architect must have a knowledge of painting and the human figure. I am quite entranced with Florence. It really is a complete paradise. I am in the midst of the fine arts every day, glutting myself with Raphael and all the most celebrated painters. I have more than once nearly lost my dinner by staying too long at a Raphael; but really, when I have been a whole hour before a painting of his I hardly fancy that ten minutes have elapsed."

"I have seen the celebrated bust by Michael Angelo (of Junius Brutus). Never was bust so happily conceived. One may read his whole life in the face, the liberator of the people, the stern fortitude in the sacrifice of his sons. The painting at Bullock's museum dwindles into insipidity before it. It is unfinished; but there is a terrifying grandeur in the sternness of the countenance that no finish could improve."

During his stay at Florence he made two excursions to Tivoli. "There have been, since my arrival here, some great discoveries, and when opportunity offers I shall have an immense deal of unpublished information to send to Mr. Soane. There is an uncommon accurately dimensioned, and well-drawn print of the temple of Tivoli that he has imitated so much. I think that it would be a handsome present to send him, accompanied with my own drawing of it, if he would not take it as a satire on the incorrectness of his own measurements; but of this I shall take time to consider well before I determine."

At Florence and Tivoli he began to make acquaintances among those who were distinguished in artistic and archaeological circles; but his accounts of these people, and the assistance they afforded him in his studies, must be deferred to the next article.

(To be continued.)

The Society of Architects Half-yearly Design Competitions, 1922.

Nine out of the ten successful competitors in the Preliminary Test submitted designs in the Final. The drawings were numbered as received, and the Jury of Assessors, after careful study of the various designs, awarded a prize of thirty pounds to Harold Anderson, Student, of Blean, author of the design marked No. 7, and one of ten pounds to H. Scott Dalby, Licentiate, of Weaverham, author of the design marked No. 1, subject to the conditions set forth in the Regulations.

Design No. 7, Harold Anderson, was placed first on account of the plan, which has fewer faults. The draughtsmanship is poor and the elevations ordinary.

Design No. 1, H. Scott Dalby, was marked very low on the plan, which is bad in many particulars and high on its draughtsmanship and elevations. Had the plan been good, first place would have been awarded this competitor on account of the high qualities of draughtsmanship.

Design No. 9 was placed a close third; Design No. 3 was placed some way behind. The remainder of the designs were not marked.

The Jury were encouraged by the improvement shown in the general standard of design and draughtsmanship.

At a meeting of Kirkcaldy War Memorial Committee held last week a letter was read from Mr. John Nairn, Forth Park, in which he submitted plans of a museum and picture gallery to be built on the grounds of Balsusney House, stating that if the plans were approved he undertook, at his own expense, to build and equip the building as shown on the plans to form part of the burgh war memorial scheme. The total cost of the war memorial scheme, including the museum and art galleries and the laying out of Balsusney grounds, is stated to be £40,000. The architect is Mr. McKay, of Glasgow.

Modern Methods in Building Construction.—XXIV.*

By Albert Lakeman, M.S.A., M.C.I.

WATERPROOFING.

The "Pruft" cement waterproofer is made by Messrs. Rogers, Welch & Co., Ltd., for Building Products, Ltd., of Sloane Square, London, who acquired the right under licence from the Board of Trade in 1914 to manufacture the waterproofer from the same formula as that used for "Ceresit" waterproofing paste, originally made in Germany. It comes under the heading of the integral method, and is supplied in the form of a rich creamy paste that mixes readily with the gauging water which is the medium by which it is distributed. It is claimed that the method adopted ensures it being carried to every part of the mortar or concrete, and the mixed material so treated is easy to work, while there is nothing in "Pruft" to affect the setting properties of the cement. The claim in connection with its waterproofing capacity states that, being colloidal in composition, it increases the density of concrete to the point of impermeability. While ordinary Portland cement contains a partial colloidal constituent, it is not present in sufficient degree to entirely fill the pores in the mortar or concrete. "Pruft," therefore, being colloidal in nature, completes the waterproofing tendency of the cement, and converts chance into a certainty. It is also stated that the compound does not adversely affect the strength or colour of concrete, but, on the contrary, it improves it in every respect. The Incorporated Institute of Hygiene has certified after test that "Pruft" does not deteriorate or lose its waterproofing qualities under extremes of heat or cold, and may be used with every confidence as a genuine cement waterproofer, and is most effective as well as a sanitary safeguard. The application is simple, and no expert knowledge is required. One part of "Pruft" is first stirred in one part of water, and then a further eleven to eighteen parts—according to the nature of the work—of water are added. The result is a quantity of "Pruft" water uniformly charged with the waterproofing agent. With "Pruft" paste it is claimed that 39 gallons of waterproofing medium can be prepared by any labourer in three minutes, and uniform distribution is absolutely certain. When used as an integral waterproofer for concrete $1\frac{1}{2}$ to 2 gallons of "Pruft" per cubic yard of concrete will be required, according to the proportions, and when used for cement rendering 1 gallon of the waterproofer will be required for each 10 yards super of surface when a $\frac{3}{4}$ -inch coat is adopted. One gallon of "Pruft" weighs 10 lb., and it is obtainable in tins, pails, drums and barrels at prices ranging from 6s. 9d. + 10 per cent. to 12s. + 10 per cent. per gallon, according to the quantity ordered. When used for rendering work, the extra cost per yard super for the waterproofer will work out at 6 $\frac{3}{4}$ d. for $\frac{1}{2}$ -inch thickness, 8 $\frac{1}{2}$ d. for $\frac{3}{4}$ -inch coat, and 11 $\frac{1}{2}$ d. for the 1-inch coat.

The suppliers also claim that the prime cost of walling in housing work may be reduced by 2s. per yard super if solid 9-inch walls with a "Pruft" plaster coat (stucco or roughcast) are adopted instead of 11-inch cavity walls. Some general hints are given in connection with the use of the compound, and these include the following: The "Pruft" should be kept dry, but not too dry, or the moisture will evaporate; before using it should be well stirred, and if it has been kept for a very long time and considerable evaporation has taken place a little water should be added; add the water to the waterproofer one part at a time, stirring thoroughly before adding the next part; wherever possible, especially in renderings, complete the work in one operation, so that the cement has not time to crystallise; care should be taken that cement work is not subject to flowing water or hot sun until it has thoroughly set and is quite hard. On waterlogged ground keep the water down by pumping, and if possible prepare the sump hole outside the building; and for good waterproof work avoid the use of large porous aggregate such as broken brick, clinker, coke, breeze, sandstone, etc. Numerous examples could be given of the application of this waterproofing material, which has been extensively adopted, but no special particulars of any one scheme are available for description.

"Ironite" is the name of a material used for waterproofing made by the Ironite Co., Ltd., of which Messrs. S. Thornely, Mott & Vines, Ltd., Westminster, S.W.1, are the managers. There are two different kinds of "Ironite" available—viz., (1) "Ironite" brand cement for flooring, and (2) "Ironite" brand cement for waterproofing. The former is especially manufactured for being mixed dry with cement, and is used for flooring, for waterproofing walls or in combination with Portland cement in the form of an "Ironite" cement slurry or grouting, thereby saving the entire cost of rendering. "Ironite" brand cement for waterproofing differs in that it is not intended for use with Portland cement except in rare cases, as ordinarily it is mixed only with water and applied with a brush.

This material therefore comes under the heading of the surface method of waterproofing, as distinct from the integral, and its method of application differs considerably from that applying to liquids, powders, and pastes which are mixed with the constituents forming the mass. "Ironite" is an exceedingly fine powder, chiefly metallic, the waterproofing effect of which is realised by its introduction into the cavities to be closed and subsequent mechanical and chemical union of the powder so introduced with the surrounding surfaces through oxidation of the powder.

The material must therefore be carefully introduced into every pore of the surface to be treated, and it must have a firm and permanent surface to work on, as any subsequent scaling or falling off of the materials forming the surface will result in the "Ironite" becoming detached. As an example, lime-plaster and whitewash are unsuitable materials, as they will soften under the influence of moisture and tend to come away from the wall. The thorough and full oxidation of the powder is also necessary to ensure success, and to accomplish this the presence of sufficient moisture, after it has been applied, is essential at all times during the oxidising process, especially during the first stages. If the needed moisture is not supplied at this time, a considerable part of the "Ironite" is liable to fall off and be of no benefit. On the other hand, moisture should not be supplied during the initial stage of the setting process in such quantities or so soon as to wash off the material. No fixed rule can be given, and the proper application of moisture at this stage calls for a little judgment. If a little water is sprinkled on the treated surface from time to time it will be possible to determine when additional moisture can be applied, as the "Ironite" should not flow with the water, and the effect of sprinkling

* PART I.—I. Introduction, Steam shovels, Jan. 13; II. Steam shovels, Trench diggers, Jan. 20; III. Grab buckets, scrapers, Jan. 27; IV. Drag-line excavators, Feb. 3; V. Derricks and cranes, radial loader, paving-breakers, Feb. 17; VI. Surplus Soil Transport (Hand Labour), Feb. 24; VII. Surplus Soil Transport (Horse-drawn wagons, Steam-driven wagons), Mar. 3; VIII. Surplus Soil Transport (Steam-driven wagons), Mar. 10; IX. Surplus Soil Transport (Steam-driven wagons, Petrol wagons, Narrow-gauge track with wagons), Mar. 17; X. Surplus Soil Transport (Narrow-gauge track with wagons, Trucks on Standard-gauge track, Electrically-driven trucks and vehicles), Mar. 24.

PART II.—XI. Foundation Work (Ordinary soils, Soft soils), April 7; XII. Foundation Work (Soft soils), April 17; XIII. Foundation Work (Soft soils), April 21; XIV. Foundation Work (Soft soils), April 28; XV. Foundation Work (Soft soils), sheet piling, May 5; XVI. Foundation Work (Soft soils), steel-sheet piling, May 12; XVII. Foundation Work (soft soils), steel-sheet piling, pumping, May 19; XVIII. Foundation Work (Soft soils), pumping, May 26; XIX. Foundation Work (soft soils), foundation piles, June 2; XX. Foundation Work (soft soils), foundation piles (cont.), June 9; XXI. Foundation Work (soft soils), foundation piles (cont.), June 16; XXII. Foundation Work (soft soils), Waterproofing, June 23; XXIII. Foundation Work (soft soils), Waterproofing (cont.), June 30.

on a small portion of the surface will be a guide in this respect. The waterproofing material must be kept absolutely dry when being stored previous to using, and it should always be mixed with water in small quantities to enable it to be used up in a short time, even if the surface to be covered is a large one. Before ceasing work all the "Ironite" mixed with water should be used up and the vessels and brushes be thoroughly cleaned, otherwise they will be destroyed in a short time. The use of "Ironite" will make the surface treated at first a dark grey or black, which will gradually change into a brown colour.

It is very important that the material be properly applied, and the procedure will vary somewhat according to the conditions. When a dry concrete surface has to be waterproofed it should be cleaned off and thoroughly saturated with water. "Ironite" should then be made into a very thin solution with water to the consistency of a very thin whitewash. This mixture is applied to every part thoroughly with a good hair stock brush. Water should be added from time to time as the solution becomes thicker, and it must be kept well stirred. The best method is to cover only about 50 square feet at one time, brushing the material well into the pores of the surface by working the wet brush in all directions. After the first coat has properly developed the second and third coats are similarly applied.

The initial set will ordinarily take place within 15 to 60 minutes or more, and the set is indicated by the surface appearing to become partially dry. When it has set, so as not to wash off under spraying, the surface should be gently moistened, and the application of moisture should be repeated frequently. The second and third coats may be a little thicker mixture or solution, but, generally speaking, are treated practically the same as the first coat. After the final application it is recommended that the surface should be occasionally moistened in dry weather.

When the surface to be waterproofed is concrete through which seepage occurs without pressure, the work can be treated by applying the "Ironite" in a dry state. The material is picked up from a board or pail with a brush and pressed against the surface to be treated, immediately after rubbing it in thoroughly by means of the brush. The seepage of water will supply sufficient moisture to cause the waterproofer to set and develop, and the application of the material is continued until the leakage is remedied.

If a pressure of water exists on the surface to be treated, it is necessary to temporarily relieve the pressure by the introduction of sumps or weeping holes to carry off the water, and when this provision is made the "Ironite" can be applied as before described. The application and development of the waterproofer will ordinarily take two or three days, and during this period the pressure must be kept down. After the "Ironite" has developed the weeping holes can be filled up with a mixture of pure cement and "Ironite" in equal parts, either packed and tamped in in the dry state or in the form of a thick paste. If a piece of cork or similar substance is driven into the hole in the first instance and kept back from the surface about 2 inches,

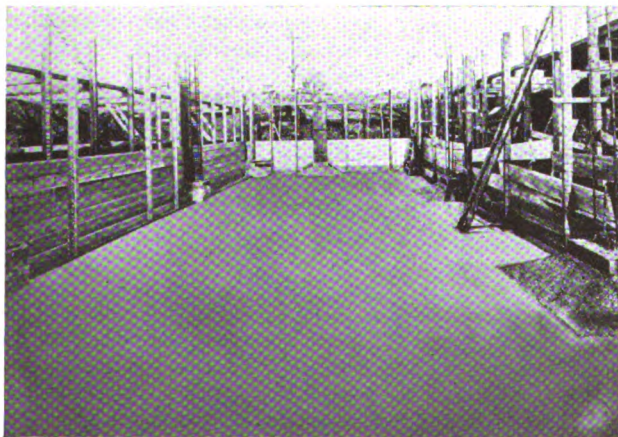


Fig. 137.—UNDERGROUND CHAMBER WATERPROOFED WITH "IRONITE."

this will prevent the filling-in material being washed out and form a background for packing the material against. In the case of sumps for drainage being formed in the floor of the building it will be necessary to finish these off at the surface with a waterproof topping, and this can be accomplished by filling in the hole with good concrete up to within 3 inches of the top and executing the remainder with a rich mixture of pure cement and clean sharp sand, to which should be added from 10 to 20 per cent. of "Ironite." Where water pressure occurs it is also advisable to provide additional material at the junction of the walls and floor, and this can be done by putting in an angle fillet composed of Portland cement, clean sharp sand, and about 20 per cent. of "Ironite." It is also recommended that when the surface is rough, or heavy water pressure is to be encountered, that

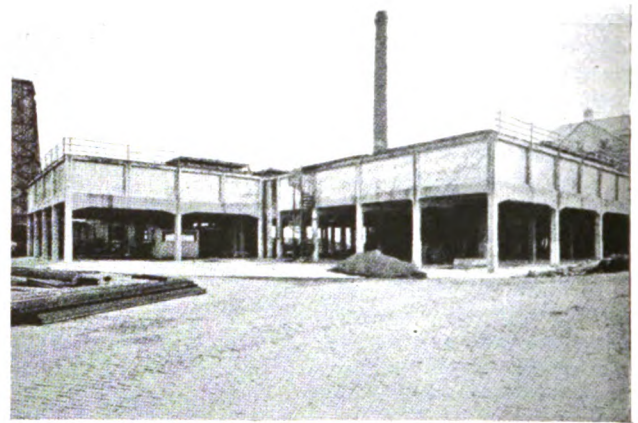


Fig. 138.—CONCRETE GAS PURIFIERS MADE GAS-TIGHT WITH "IRONITE."

the developed "Ironite" surface be thoroughly wetted and a slush mixture of about the consistency of thick cream be applied, this mixture being made with Portland cement and about 15 to 20 per cent. of "Ironite," first mixed dry and afterwards mixed with water.

When existing brick walls are to be waterproofed by an internal surface treatment it is essential to get a good material at the joints, and if there is any doubt about the mortar having sufficient hardness and strength, the joints should be raked out for a depth of $\frac{3}{4}$ inch, and repointed with a good cement mortar to which 15 or 20 per cent. of "Ironite" has been added. After this pointing is completed the surface can be treated in a similar manner to that described for concrete walls.

In all work it is, of course, important that a continuous treatment is provided in the floor and wall, and in the case of a new structure, where the treatment is to be made on the exterior surface of the walls, the "Ironite" must be continued through the thickness of the wall at about the floor level to connect up with the waterproofing in the floor construction.

Fig. 137 shows an underground chamber which is 10 feet below the water level, and which was rendered watertight by the use of "Ironite" on the floor and walls, and fig. 138 shows some gas purifiers constructed of concrete which were made gas-tight by the application of this material. The makers also have some small tanks built of small breeze blocks 3 inches by 3 inches by 1 inch, which were jointed with "Ironite" and cement, and then treated with one coat of "Ironite" and cement slurry, one being treated on the inside only and the other on the outside only, and these have both held water for two years without any signs of leaking.

The price of the "Ironite" waterproofing is 1s. 3d. per lb., and if required special "Ironite" brushes are supplied at a price of 6s. 6d. each. Allowing for three coats as described, it is estimated that 1 lb. of "Ironite" will cover 2 square yards. In the case of the "Ironite" flooring material—which not only makes the work impermeable, but also increases the resistance to wear under heavy traffic—the topping will vary from $\frac{1}{2}$ inch to 1 inch or more, according to the conditions.

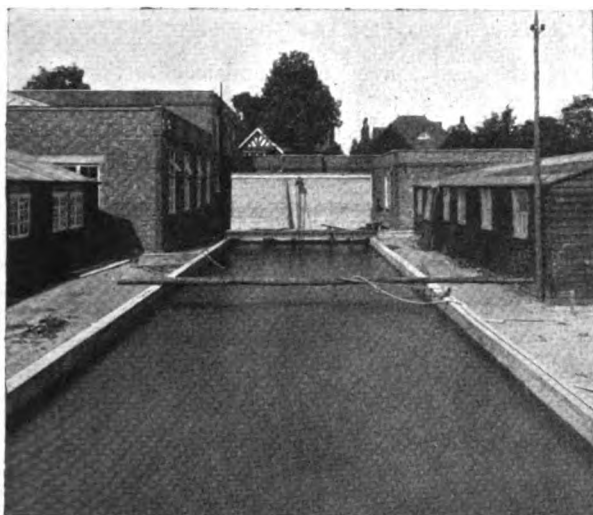


Fig. 139.—REINFORCED “NOVOID” CONCRETE TANK AT THE NATIONAL PHYSICAL LABORATORY, TEDDINGTON.

To each 100 lb. of Portland cement 15 to 25 lb. of the “Ironite” is added, dependent on the wear the floor is to receive, the two materials being very thoroughly mixed in the dry state. This mixture is then mixed with clean crushed granite or clean sharp sand in the proportions of 1 to 2 by bulk, and water is added in the mixing as with ordinary granolithic. It is recommended by the makers that average floors be formed by laying 1 inch or 1½ inch granolithic including ½ inch “Ironite” topping on a good concrete base; this ½-inch topping to consist of 20 lb. of “Ironite” to every 100 lb. of Portland cement, thoroughly mixed while dry, and subsequently added to twice the quantity by bulk of clean crushed granite. On this basis about 3½ lb. of “Ironite” is required per square yard, while the use of 25 lb. of “Ironite” to every 100 lb. of cement requires about 4½ lb. of “Ironite” per square yard of flooring. The price of the “Ironite” flooring is 65s. per cwt. Both the waterproofing and flooring materials have been extensively used, and many examples of successful treatment can be put forward by the suppliers to support their claims.

“Nonporo” is a waterproofer supplied by Messrs. Broad & Co., Ltd., of South Wharf, Paddington, and it is an integral waterproofer which is mixed with the dry cement. It is a very finely ground pink powder, and it is tinted this colour in order that there may be no doubt as to the proper mixing with the cement. The coloration disappears as the work dries, and the use has no deleterious effect on the cement mixture. For surface renderings and wearing coats 4 lb. of “Nonporo” should be used for every 100 lb. of cement; for mass concrete 2 lb. should be added to every 100 lb. of cement, and for cement washes for internal or external application the proportions are 4 lb. of the waterproofer to 100 lb. of cement. The average cost of the material is 1s. per lb., and it is claimed that it is economical to use. The makers claim that it is suitable for all classes of waterproofing work, whether in the form of mass concrete, jointing of sewer pipes, roughcast on walls, or cement washes.

“Novoid” is a waterproofer in powder form manufactured by the Torbay and Dart Paint Co., of Billiter Street, London, and it comes in the integral class, as the powder is mixed dry with the cement before the latter is added to the aggregate in concrete-making.

The amount of powder used varies from 3½ to 14 per cent. of the weight of cement, according to the conditions governing the work to be executed.

An example of the application of this material is shown in fig. 139, which depicts a tank constructed at the National Physical Laboratory, Teddington, for the British Admiralty Research Department, under the supervision of H.M. Office of Works. The tank is 120 feet long by 20 feet wide and 10 feet deep, 8 feet being below the ground. There is also an observation chamber at each end, which is 12 feet on the ground. The walls of the tank are of reinforced concrete 7 inches thick at the bottom, reducing

to 4½ inches at the top. The concrete used was a 4 : 2 : 1 mix, and 14 per cent. of “Novoid” was added to the cement. No rendering whatever was used, and as the tank has now been filled for over 12 months, it is evident that the waterproofing adopted was successful.

(To be continued.)

“The Architect” Fifty Years Ago.

JULY 6, 1872.

THE DOME OF ST. PAUL’S.

SIR,—As you have done me the honour of noticing my remarks on that type of dome of which St. Paul’s affords the most conspicuous example, I take the liberty of offering some observations with a view of simplifying the question and reducing it to a single issue.

The remarks you have alluded to originated in lectures I was preparing on domes for the Royal Academy, and in which I reached that variety of dome which forms a conspicuous external tower, and which may be emphatically called the *modern* form of dome—the last. The almost essential object of this form of dome is its *external* effect; for, striking as is its interior, no one can for a moment doubt that, do what you will, it suffers from excessive height. The same dome, in fact, cannot look *perfectly* well from within and without.

Added to this is the circumstance that this form of dome seems to require for external beauty of outline a lantern erected upon its apex; an element involving extreme structural difficulty and danger.

Now, taking these conditions into consideration, I would remark—1. That there is no question as to the propriety of placing a roof, externally visible, over a vault, only seen internally. 2. That there is no question, when we desire to erect a *flèche* upon such a roof, as to the propriety of providing for its support by means of construction concealed between the vaulting and the roof; as, for example, at the Cathedral at Amiens. 3. The question, then, at issue reduces itself to this: Is it lawful in any case (such as the case of a structure erected expressly or mainly for the support of an extensive dome) to give to the external roof a form similar to, and originally suggested by, the internal vault? If mediæval example is of any value in answering the question, I would refer to that of St. Mark’s at Venice, where the internal domes are of brick and the external of timber, the lantern of the central dome being carried by timbers, conically arranged, between the two. This is the same in principle with the construction of St. Paul’s, and yet more identical with more modern domes, where the outer and middle structure is of iron.

I will only add that Wren’s dead wall concealing the clerestory is wholly unconnected with the question. No word ever proceeded from me in apology for that feature, nor are the two parallel, for one may be a vicious fallacy, and is unquestionably injurious to the effect of the dome, whose supports it encumbers and in part conceals, while the other may be quite admissible—this being, in fact, the question under consideration.—I am, Sir, your faithful servant,

GEO. GILBERT SCOTT.

Forthcoming Events.

Friday, July 7.—Public meeting at the Carpenters’ Hall, Throgmorton Avenue, E.C., to protest against the proposed demolition of the ancient arch discovered under London Bridge. 5.30 p.m.

Saturday, July 8.—Edinburgh Architectural Association. Annual excursion to Stirling Parish Church, Castle, etc.

Wednesday, July 12.—Northern Architectural Association Club. Evening meeting at Heworth Quarries.

Coventry diocese has decided to perpetuate the memory of the re-founder of the See, the late Bishop Yeatman-Biggs. It has decided to accept the recommendation of the Cathedral Chapter that the restoration of Old Palace Yard, Coventry, as a diocesan Church House, according to the Bishop’s scheme, would be the most fitting memorial to his memory and the most serviceable to the diocese. It was left to the Cathedral Chapter to proceed with the arrangements. There are several fine rooms awaiting restoration, and the buildings are not yet paid for. The late Bishop spent £3,000 upon the restoration of four rooms.

The Ironmongers’ Company have acquired a site at Shaftesbury Place, Aldersgate Street, on which to erect a new hall in place of the one in Fenchurch Street, destroyed by German bombs. Shaftesbury Place is a small *cul-de-sac* containing formerly about a dozen small houses,

Royal Institute of British Architects.

The seventeenth general meeting (ordinary) of the session was held at 9 Conduit Street, W., on Monday, July 3. Mr. Paul Waterhouse, president, occupied the chair.

Mr. Arthur Keen, hon. secretary, announced the death of Mr. G. E. T. Laurence, elected Associate 1887 and Mr. Henry Higgins, elected Licentiate 1911.

The principal business of the evening was to hear a paper by Dr. Thomas Ashby, D.Litt., Hon. Associate, Director of the British School at Rome, entitled

RECENT EXCAVATIONS IN ROME.

One of the most important results of the latest excavations in the Forum, said Dr. Ashby, has been the confirmation obtained of certain statements of the ancient authorities in regard to the early history of Rome, which had previously been doubted by hyper-critical historians. Thus we may take the Palatine as the original nucleus of Rome, even though the wall of Romulus probably never existed. The Palatine was sufficiently defended by its lofty cliffs and by the two marshy valleys which nearly surrounded it. Remains of a cemetery which began to be used about 750 B.C., that is about the date of the traditional foundation of Rome, have been found in the Forum near the Temple of Antoninus and Faustina, though this cemetery probably belonged to a somewhat enlarged community, but ceased to exist about 550 B.C., when the city of the Seven Hills came into being, and as it became necessary to make use of the two marshy valleys above mentioned which now were drained and converted respectively into the Forum and the Circus Maximus—the civic centre and the place of recreation. Tradition ascribes to Tarquinius Priscus the construction of the Cloaca Maxima at this very date, and scanty traces of it have actually been found; it appears to have been an open channel, but several of its branches, constructed of the same material, a grey volcanic tufa, have been preserved, and may claim to be by two or three centuries the earliest Roman arches in existence.

To the same period—again that to which tradition ascribes it—belongs the earliest city wall of Rome, built of the same material, the blocks used being about a foot high, and also the Temple of Jupiter Capitolinus, further remains of which have recently been brought to light, belonging entirely to the podium.

The same material may be found in several early buildings in the Forum, notably in the podia of the temples of Saturn and of Castor and Pollux, both of them attributed to the beginning of the fifth century B.C.; and we are on fairly safe ground in attributing any buildings which show the use of capellaccio, as this particular kind of tufa is called, to, roughly, 550 to 450 B.C.

Of the succeeding two centuries we know very little. In the successive reconstructions of the shrines and sanctuaries of the Republican Forum the remains of the original structures were not altogether destroyed, and thus in the pavement of the Lacus Curtius and in the shrine of Venus Cloacina we may trace a succession of different building materials, each belonging to a different reconstruction, and testifying to a gradual rise in level.

Other changes may be seen in the Rostra, the platform from which speakers addressed the people assembled in the Comitium. Various changes in orientation as well as in level seem to indicate that the Curia, or Senate House, originally placed by the kings on the north side of the Comitium, must also have changed its orientation more than once. But it was Julius Caesar who transferred the Rostra to the north-west end of the open area of the Forum, which lay between the two basilicas which had sprung up behind the two rows of tabernae. This change made it possible to give the Forum a proper architectural setting. On each side of the open space there was to be a magnificent basilica, the Curia was to be reconstructed, and the whole of the open area of the Forum paved; but Caesar's death cut these projects short, and it was not until Augustus returned to Rome as a victor that he was able to bring them to completion.

Close to the well of Juturna stood, as was fitting, the round temple of Vesta. Only its foundations remain, but

enough fragments have been found to give us an idea of its appearance. They date from the reconstruction by Julia Domna, the wife of Septimus Severus, as, indeed does the House of the Vestals—generally known as the Atrium Vestae, from the large court surrounded by a portico which forms its central feature.

The Romans did not, as we do nowadays, completely clear the site of a new building, but left the floors and walls of the building they destroyed or superseded lying often only a few inches below the new pavements; and as this process was often repeated several times we are able to gain far more information by the excavation of the site of a Roman city than would be possible supposing that modern London were to fall into ruins and be excavated two thousand years afterwards.

Nero's reconstruction of the Atrium Vestae was only a part of a grandiose building scheme which transformed the whole of the topography of this part of Rome. Before the time of Nero the Sacra Via ascended the ridge of the Velia in a slight curve, but the erection of the Golden House after the fire of 64 A.D. involved the provision of an adequate approach to a group of buildings which covered an area greater than that of St. Peter's and the Vatican, including the garden. From the temple of Vesta, a huge portico, of which only the foundations remain, led up to the vestibule on the summit of the Velia. These foundations, which were identified by an American archaeologist, Miss Van Deman, cut through the remains of a large and important republican house, or it may be a group of houses, of which no report has yet been published. The foundations of other buildings on the same orientation have been found under the Basilica of Constantine, and the Via Sacra was obviously laid by Nero to run in a straight line up to the entrance of the Golden House between two porticoes. The site of the Colosseum in the valley beyond was occupied by an ornamental lake, and the principal palace lay to the east of it.

The unpopularity of Nero's appropriation of such an immense extent of ground, almost in the centre of the ancient city, is clear from the eagerness displayed by his successors in restoring it to public uses. Vespasian constructed the Colosseum in the centre, Titus built baths opposite to it, but a fire in his reign appears to have rendered uninhabitable that part of the Palatine which had escaped the conflagration of Nero, and Domitian was entirely occupied in the reconstruction of the imperial palaces on that hill. It was only Trajan who found himself able to surrender the main palace of the Golden House, and to erect on its site those immense baths which had been attributed to Titus until Professor Lanciani correctly identified them in 1895. Finally, Hadrian erected on the site of the vestibule, the extent of which we may judge from the position of the Arch of Titus, pushed up into a corner as it is, the great double temple of Venus and Rome. The two apses lie back to back, and were surrounded by porticoes.

From the Arch of Titus a branch road, known as the Clivus Sacer, ran up to the area between the two main imperial palaces on the Palatine, following the line of the original road of approach through the primitive settlement. In the last century of the republic its vicinity to the Forum made the Palatine the favourite residence of the great men of Rome. Several houses of this period have, indeed, been found. To name no more, Cicero and his brother, his clients M. Aemilius Scaurus and Milo, his enemy Catiline and his opponent Hortensius all had houses on the Palatine, and there is now little doubt that the last named is preserved to us, and was, unlike the rest, never obliterated by the enormous substructions of the imperial palaces. Augustus bought the house that had belonged to Hortensius, "remarkable," as Suetonius says, "neither for its size or its adornment; its porticoes were small and built of Alban stone, and its apartments were without any marble decoration or exquisite pavements." To it he added an atrium in which the Senate could meet, but the house itself remained a modest one: and it is to be recognised in what has hitherto been known as the house of Livia, the painted

decorations of which belong to this period. We may notice that just as the "house of Romulus" and the "hut of Faustulus," the shepherd who gave him shelter, lasted on until the Christian period, so the house of the founder of the empire was respected by later rulers, who preferred to erect vast arches to support the enlargements of their buildings rather than sweep away the humble dwelling of their great predecessor.

The successor of Augustus, Tiberius, erected the first of the great imperial palaces on the north-west summit of the hill known as the Cermalus. Caligula extended it towards the Forum, and we are told that he considered the Temple of Castor as the vestibule of the palace. That this is no mere rhetorical exaggeration has been shown by the recent notable discovery under the floor of S. Maria Antiqua of an open water tank, one lined with marble, which must have once stood in the middle of a great peristyle or courtyard, and is orientated with the palace of Tiberius. Of his bridge from the Palatine to the Capitol, which was destroyed by his successor, no remains, naturally, exist.

Claudius, on the other hand, constructed a splendid and magnificent two-storied residence on the south-east summit of the hill, the Palatium.

Nero had already planned a huge palace which should join the Palatine with the Esquiline (*domus transitoria*), when the fire of 64 A.D. which destroyed it enabled him to realise his projects in still larger measure. But on the Palatine he had time to do but little. It was on Domitian, after the imperial residences on the Palatine had been entirely laid to waste, that the task of reconstruction fell. He has left his mark on it, just as Julius Cæsar and Augustus are responsible for the main outlines and for much of the actual building in the Forum.

Excavations are in progress on the Imperial Fora. Professor Lanciani is the president of a commission which has been entrusted with considerable powers and funds for the acquisition of their sites. Modern Rome is confronted with precisely the same traffic problem as that which the emperors, down to Trajan, had to deal with, until he finally solved it by occupying the whole space between the Capitol and Quirinal with his great Forum.

No discoveries of first-rate importance have been made of recent years within the centre of the modern city, but it is worth noting that the construction of two large banks in the Piazza Colonna, one of them the Banco di Sconto, of which a good many of us heard a little too much at the beginning of the year, led to the discovery of a large group of blocks of houses of the middle of the second century A.D., and not of the Porticus Vipsania, which apparently did not extend so far to the south as had hitherto been believed.

The exploration, under the direction of Professor Lanciani, of the substructions of the Baths of Caracalla, have thrown great light upon the details of the construction of these baths, and have brought to light the largest sanctuary of the Persian Sun God Mithras that is known to us—which was introduced there at a later date. Considerable work has also been done in the outlying portions of the baths.

DISCUSSION.

Commendatore Lanciani, Honorary Corresponding Member, in proposing a vote of thanks, said he did so with pride and pleasure, and he also wished to express his personal gratitude for the kind way in which Dr. Ashby had spoken of his archaeological work. He and Dr. Ashby had been friends and co-workers for more than a quarter of a century, and during that time their friendship had never been obscured by any passing cloud. Many were the happy days spent together in exploring the hills and dales, and sharing their frugal food on some conquered pinnacle. The memory of those times would never fade, but, on the contrary, would grow stronger. The subject of "Recent Excavations in Rome" was a difficult one to treat because of the "embarras du choix." It was remarkable that more excavations were being made and more discoveries have taken place since war broke out in 1914, than in the previous peaceful decade. The most recent find was one which shook one's faith in the Roman tradition, for it was made by a very clever man, who claimed that the remains dated back

much earlier than the eleventh century before Christ. He (Commendatore Lanciani) had visited the spot and would only say at the moment that there were Etruscan remains which seemed to push back considerably the date of the naissance of Rome. But the discoveries had not been verified yet, so judgment must be reserved.

Professor H. E. Butler, London University, in seconding the vote of thanks, said it had been a delight to hear his friend Dr. Ashby talk on the more recent discoveries in Rome.

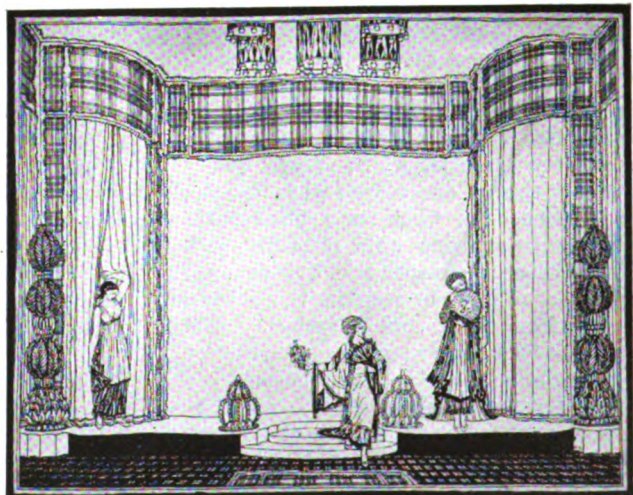
Professor Beresford Pite spoke of the very great pleasure it was to the Royal Institute to have Commendatore Lanciani present. In 1909 Dr. Ashby had read at the Town Planning Congress organised by the R.I.B.A. an extraordinarily valuable paper on the vaults of Rome. How interesting and alive the subject of ancient Rome was to-day! How singular it was that Rome, which had a doctrine of town planning and a system of rectangular streets and consistent outline, which imposed that doctrine from England to Syria and built cities on a stereotyped plan based on a highly scientific system, was absolutely unable to apply that doctrine to itself! Rome completely fails as an example of theoretical town planning. It was their Via Sacra which hindered development; just as Athens was baulked by the Acropolis. The Forum never straightened itself. There was an extraordinary ignoring of all the civil conditions of life. It seems as if the Romans entirely ignored the housing of the citizens, but had acre after acre of useless public spaces. In the heart of the city there must have been the congestion which one saw to-day. History was being repeated. This country was part of an Empire which possessed many of the same aspects and the same difficulties as that of Rome.

Mr. E. P. Warren remarked that the more one saw of the freshly-discovered antiquities, the more one was struck by the fact that there are few things enjoyed to-day in the way of material pleasantness of life of which the ancient Romans did not possess the equivalent. He remembered being shown in 1913 a room which contained the machinery of an hydraulic engine dating from those times. There were, of course, many different devices for heating.

Mr. Arthur T. Bolton and Mr. Theodore Fyfe having also spoken,

Mr. Paul Waterhouse put the vote of thanks, which was carried by acclamation.

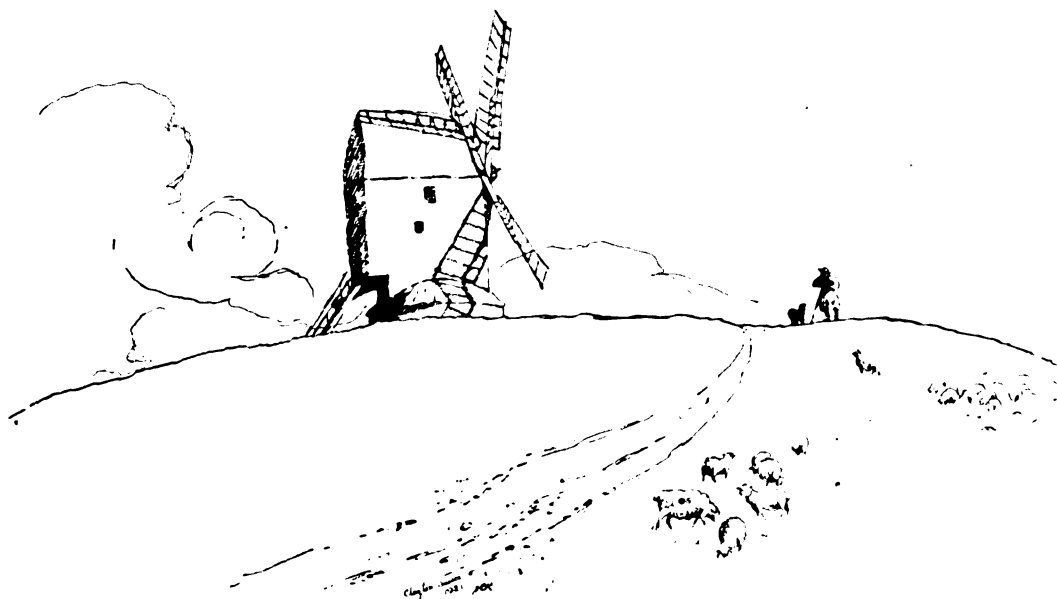
Dr. Ashby, in the course of his reply to the questions raised, agreed that there was in Rome a complete absence of the regular planning found in its dependent cities. The position of the gates in the original Serbian wall had been dictated by the position of the hills and valleys, and a formal plan became impossible. There were no ancient Roman private houses preserved in elevation. To study the domestic buildings one must go to Pompeii or, better still, to Ostia. At Ostia one found houses arranged round a courtyard in the Elizabethan manner as well as plenty of flats: the houses were not erected on the stereotyped plans associated with Pompeii.



HERMAN ROSSE DESIGN FOR A STAGE

The Old English Windmill.

By J. C. Kershaw



THE SOUTH DOWNS: CLAYTON MILL.

A Norwich newspaper recently gave the number of windmills marked on Faden's map of Norfolk in 1797; from which it would appear there was a total of 176, supposing that there was but one mill at each of those twelve mid-Norfolk villages where the specific number is not stated. As several of the other villages had three mills each, one might say, roughly, there were about 180 windmills in that county a little more than a century ago. Even now it is probable that the county of Norfolk has more windmills still working than any other, with Suffolk a good second, and then Lincolnshire, Nottinghamshire, and Essex. Kent still has some working, but a much greater number we find to be in a ruinous condition, or gone entirely; though very often leaving behind a memorial in the form of a place-name. There seems to be no windmill left still working in Wiltshire, although there is a forlorn and sailless tower of one at Porton, near Salisbury; surely there must have been many formerly on those fine open Wiltshire Downs—they almost cry out for some, if only as landmarks. The Sussex windmills have rapidly disappeared within the last thirty years, and even the two or three which still break the long, bare skyline of the South Downs turn out on closer acquaintance to be not what they seem—mostly converted long since into tea-houses for tourists.

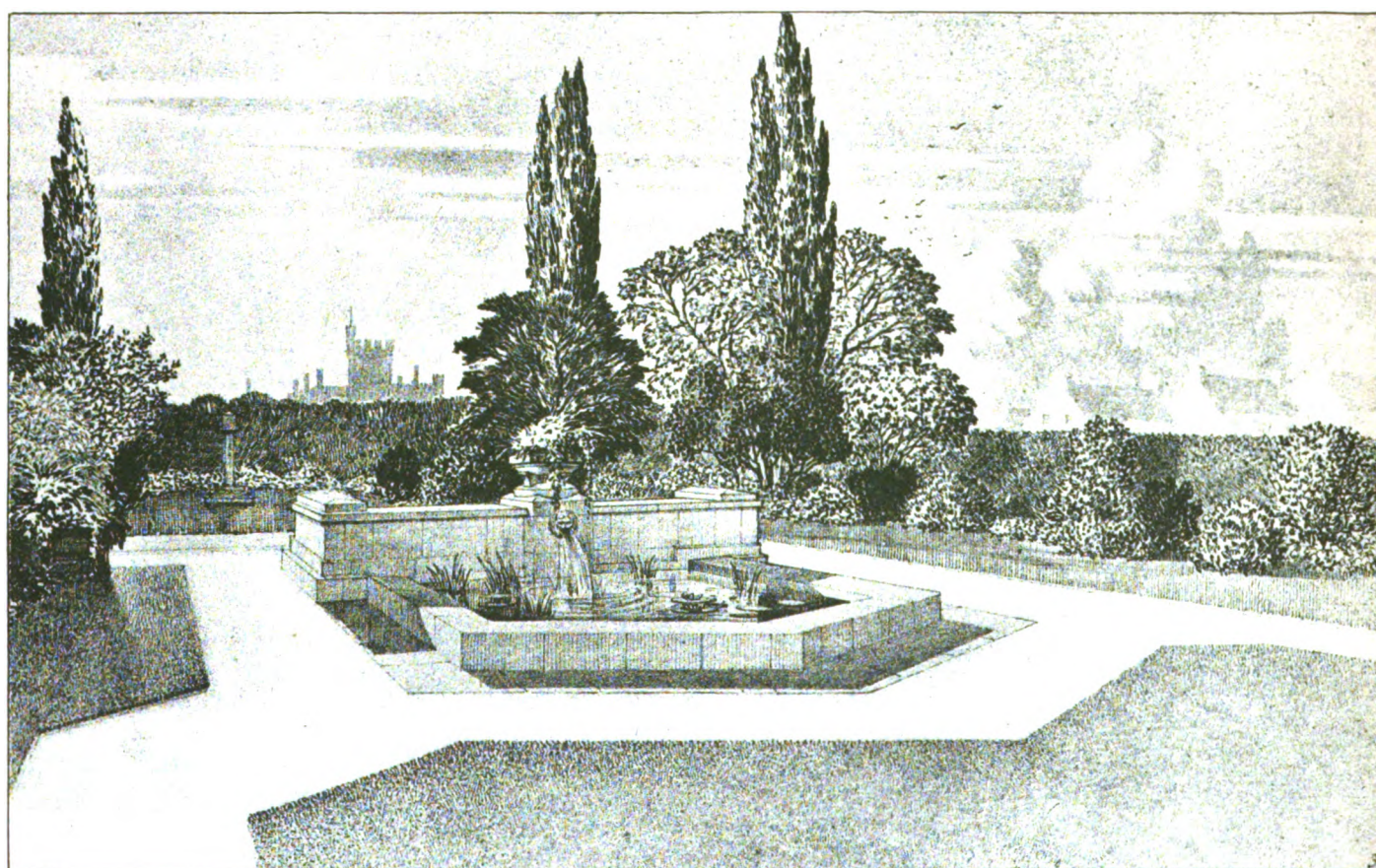
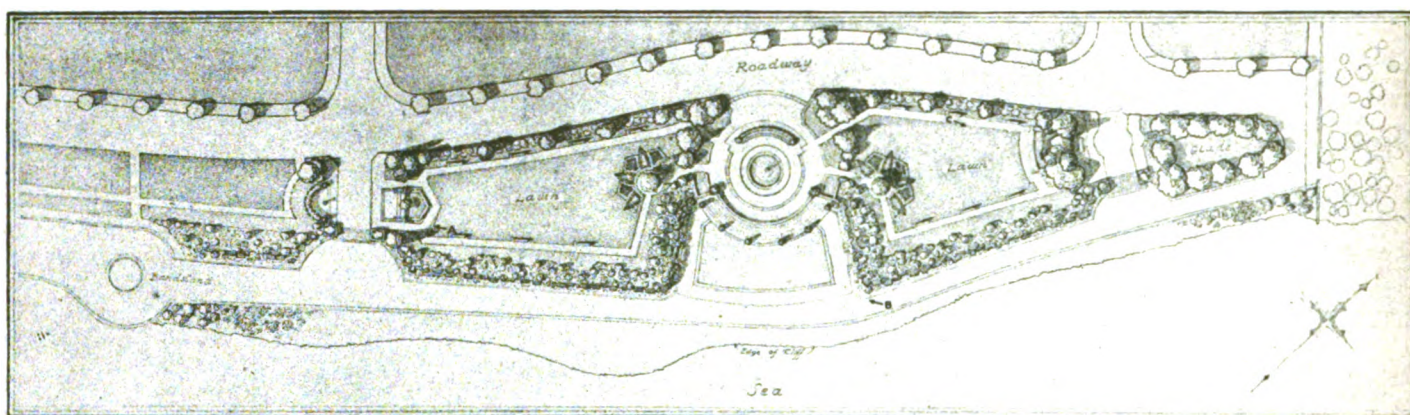
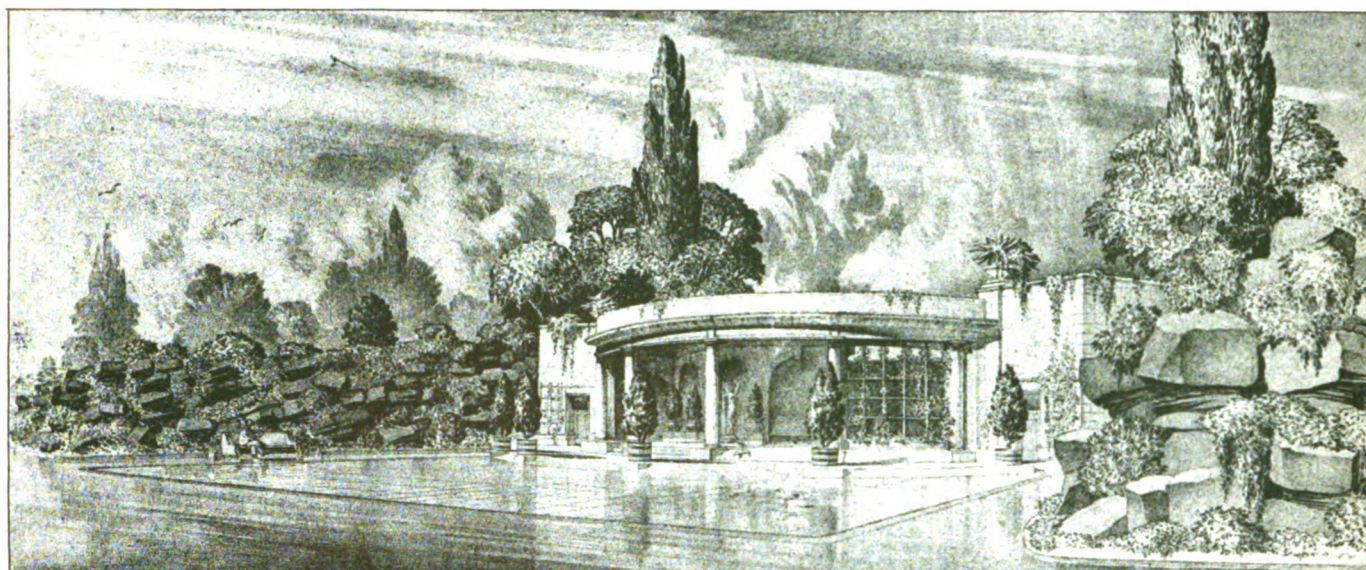
Of the windmills still working in England quite a large number have but two sails or sweeps, having lost two by decay or gales; and the high price of timber and labour during the last few years has often prevented their renewal. Yet several millers assert that they do more work in proportion than with the proper complement of four sweeps, though they do not run so steadily. The reason they give is that with only two sweeps there is much greater area for the wind to escape behind the sails after having expended its useful energy, and consequently there is, so to speak, less "back" pressure. Perhaps this is one reason why the steel-wheel windmill with almost its whole area filled with vanes is not so efficient in utilising wind pressure as the old four-sailer. The former is cheaper and lighter; otherwise it appears to be a retrograde step in the scientific production of power from wind, and is certainly substituting an ugly machine for a highly picturesque structure.

Windmills may be distinguished as post or tower mills, for those mills with the round-house substructure are constructed with main-post and struts just like the mills where these are open to view, but in the former the round-house wall conceals the timber-work. The heavy timber cross or footing of a post-mill usually rests

at the ends on four short and substantial brick pillars, but one very ancient mill at Carlton-le-Moorland in Lincolnshire has the cross bedded directly on the ground, being merely levelled by heavy wooden packing or wedges under the ends of the cross. An old tower mill at Adisham in Kent is weatherboard and an even batter right to the ground, but nearly all wooden tower mills stand on a heavy rectangular brick substructure with very slight batter, the tower itself being usually octagonal (rarely hexagonal) with very considerable batter. The big tower mills in the Midland counties are entirely of brick, and appear to be invariably circular.

The measurements of the main-post of several post-mills—or stump-mills, as they are often termed by the villagers—varied only between 18 in. and 2 ft. square; they were all made from an oak trunk squared by the adze and the edges chamfered. The sail-shaft is set at an angle with the horizon both to get plenty of clearance between the sweeps and mill-body and keep the thrust backwards, and also because it has been found by experience that at this angle the sweeps are in the most favourable position to utilise the wind pressure. The shaft in the old days was an oak trunk about 18 in. in diameter adzed to an octagon for the greater part of its length. Several of these wooden shafts are still working, but in the more modern mills the sail-shaft is much smaller in section and of cast iron, or "metal" as it is generally called by the miller to distinguish it from wrought iron. Formerly the two "middlings" or main timbers of the sails (to which the sweeps are fastened) must have been fixed to the sail-shaft by wrought-iron fastenings; but when ironfounding became general the middlings were usually wedged into two strong cast-iron sleeves or boxes placed crosswise and cast in one piece with a circular neck to form the main bearing; whilst in the most modern mills the shaft, bearing, and sleeves for the middlings are all one casting. A few windmills in England still use canvas on all four sweeps, quite a number have two sweeps for canvas and two louvred or shuttered, whilst most of them have all the sweeps louvred, or "patent" as the miller still calls it, though it is over a century since the patent was taken out.

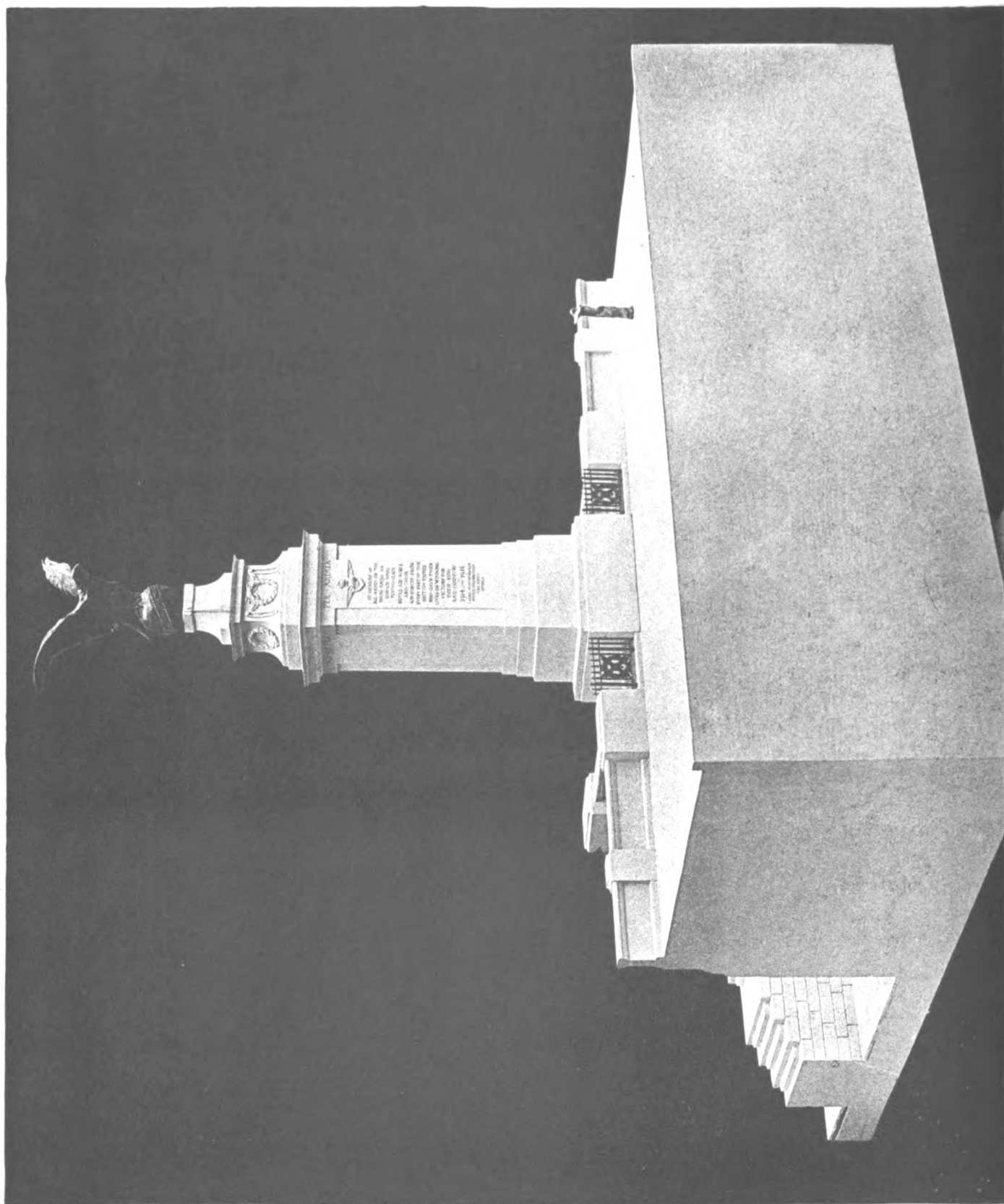
The large gear-wheel on the sail-shaft is usually, and of old was invariably, built up of heavy timber, and may be from 8 to 12 ft. in diameter; each tooth (of hornbeam, beech, or apple) morticed separately into the rim and pinned at the back; the wheel running with surprising truth. This big gear-wheel drives the vertical shafts which revolve the millstones by means of bevel gear-wheels; but the old Carlton-le-Moorland post-mill still



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RAMSGATE: EAST CLIFF GARDENS.

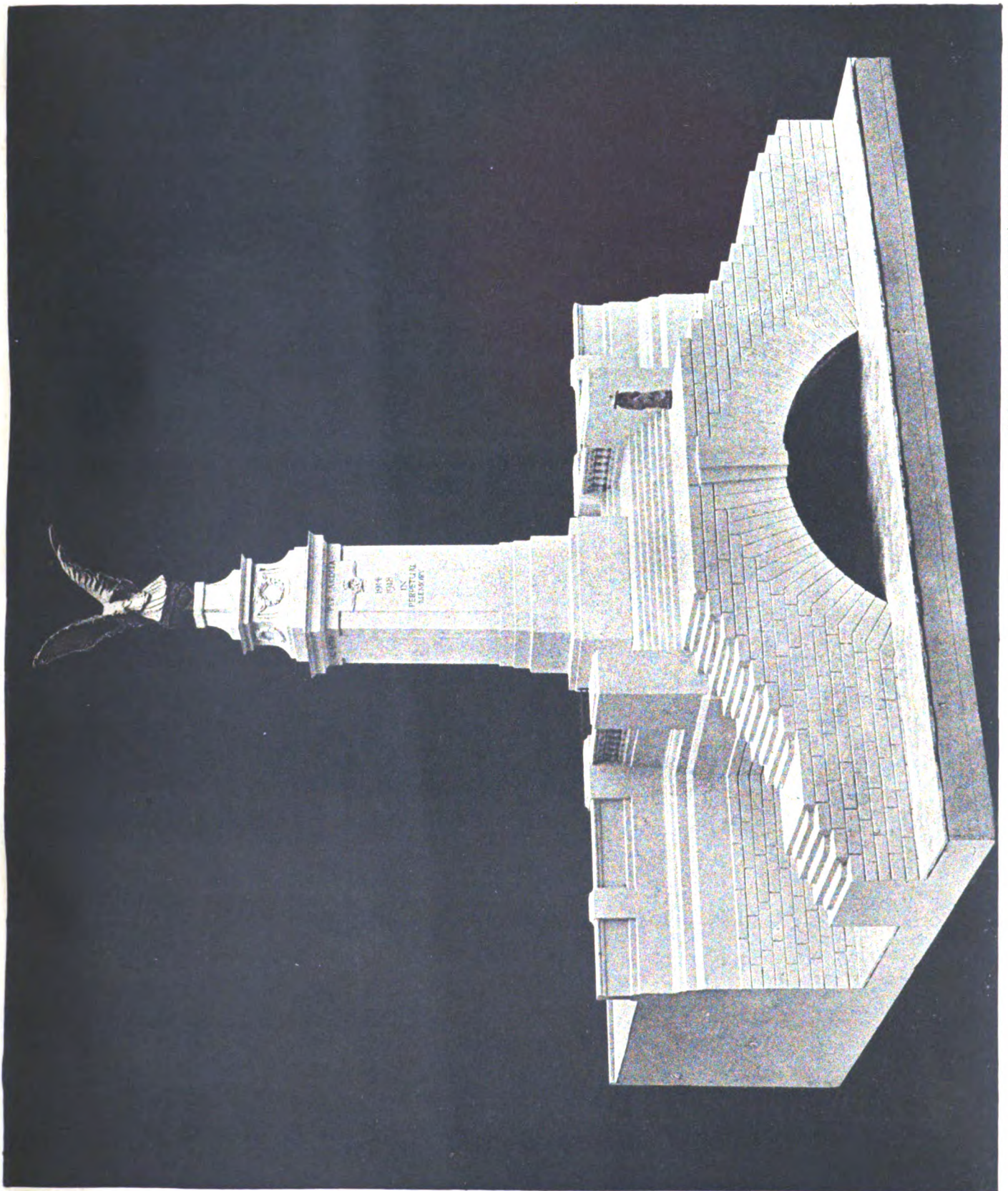
SIR JOHN BURNET, A.R.A., AND PARTNERS, ARCHITECTS.



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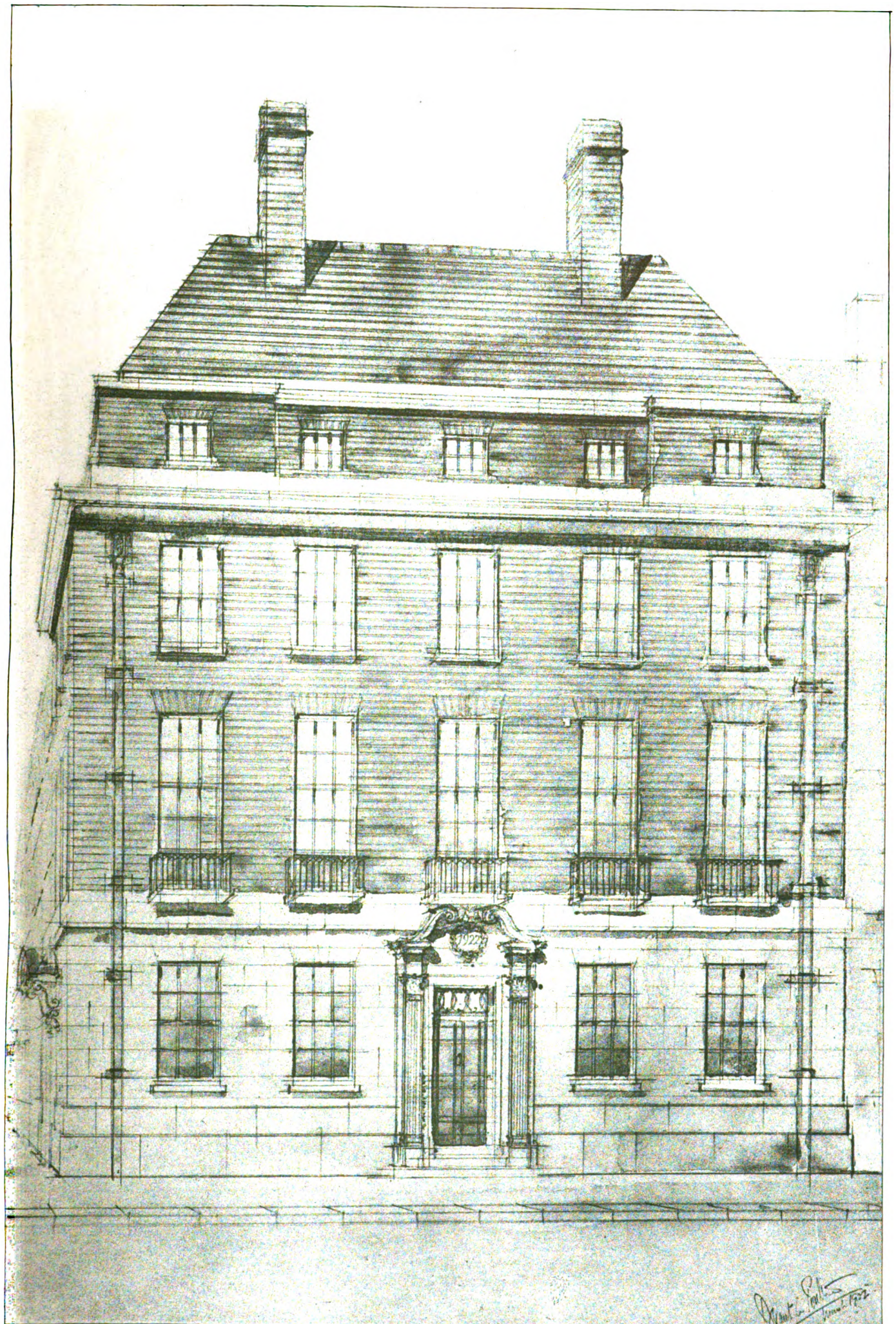
R.A.F. MEMORIAL MODEL, TO 1/4-INCH SCALE.

THE ARCHITECT, JULY 7th, 1922.



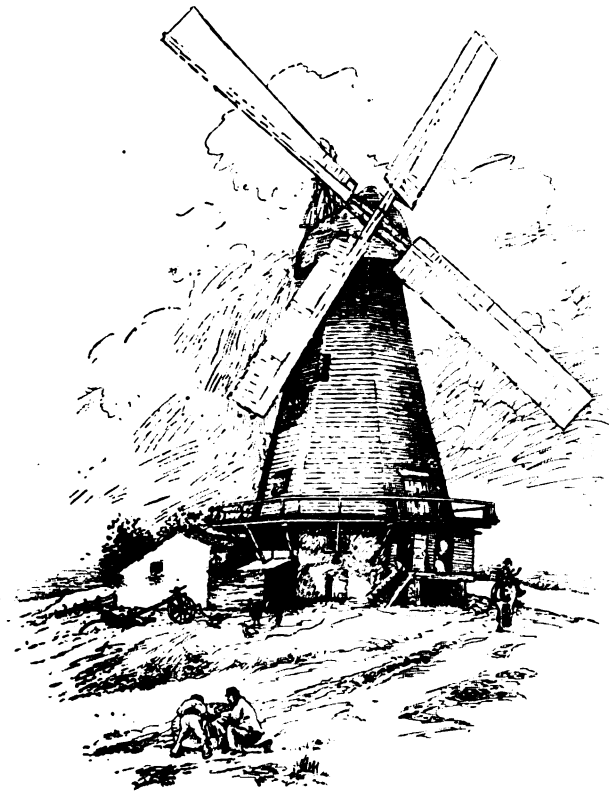
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R.A.F. MEMORIAL MODEL, FROM THE RIVER.
SIR REGINALD BLOWFIELD, R.A., ARCHITECT.



TWO HOUSES AT WESTMINSTER.

BRIANT A. POULTER (P. MORLEY HORDER & A. B. POULTER) ARCHITECT.



OLD TOWER MILL, BARHAM DOWNS.

retains a great wooden lantern-pinion on a millstone shaft instead of a bevel wheel. It consists of two circles of wood perhaps 2 ft. in diameter and 3 or 4 in. thick, hooped with iron around their edges; the eleven staves are also wood and about 3 in. diameter; they show very evident signs of hard work in bygone days. It is quite probable this is the only surviving wooden lantern-pinion in this country; the mill has not been worked for years and but two sails remain, yet the interior is practically intact, and from its appearance might date back more than two hundred years. It is looked after and cared for to some extent, but it is certainly a windmill well worth preserving for future generations, who may conceivably have a different estimate of the relative value of things artistic and utilitarian from our own times.

More than one tower mill in Kent has the large endless screw or worm fashioned from hardwood, which is said to be elm; anyhow, one of them has been working nearly a century, and is still in beautiful order. This worm gears into the circular rack around the top of the tower, and by means of the fan-gear revolves the whole cap, and therewith the sails, to face the wind. The louvres of the sweeps in the most recent mills are opened or closed by bell-cranks worked by a rod passing through the centre of the sail-shaft and manipulated from the back of the cap by a lever from which hangs a rope or chain. One mill, which was altered from canvas to louver sweeps, had a solid sail-shaft of cast iron; a clever millwright adjusted a fixed drill at the back end of the shaft, set the mill running, and managed to bore a hole up the centre of the shaft to the front end—some 12 ft. in length—without running more than $\frac{1}{4}$ in. out of truth. The rope or chain regulating the louvres is double or endless, passing over a pulley at the top of the mill and descending to the gallery or ground, where regulating weights are attached to it according to the strength of the breeze. One side of the chain, in its descent from the pulley, is attached to the lever actuating the louvres, so that pulling down one side of the chain opens the louvres and the reverse. Any sudden squall forces open the louvres, lifting up the weights.

A heavy timber yoke or collar, hinged in two or three places, almost encircles the outer edge of the big gear-wheel on the sail-shaft, and forms the brake to stop the mill and render the sails immovable. The brake is worked by a lever, which projects from the back of the cap, a rope hanging from its end so that the brake can be applied

from the gallery or ground. Of course it can also be worked from the interior at the top of the mill. Thus there appear, as a rule, to be three chains or ropes hanging down from the top of a windmill, one of which is really a doubled rope. But sometimes in Kentish tower mills there is also an endless chain, which by means of an exterior sprocket-wheel revolves the cap to face the wind when the automatic fan-gear is not working, and the turning must be performed by hand.

The old-time millwright was evidently a man of resource, and, as he invariably used what local materials he could and adapted things in common use to the needs of a mill, he never produced unsightly effects. Hence the van or cart springs in some mills to hold the louvres shut against the wind pressure, unless it was too violent, when the springs gave more or less. Hence also the cart-wheel at the end of the turning-lever in many post-mills, to ease the labour of turning the whole mill to the wind, so that one man can easily effect this.

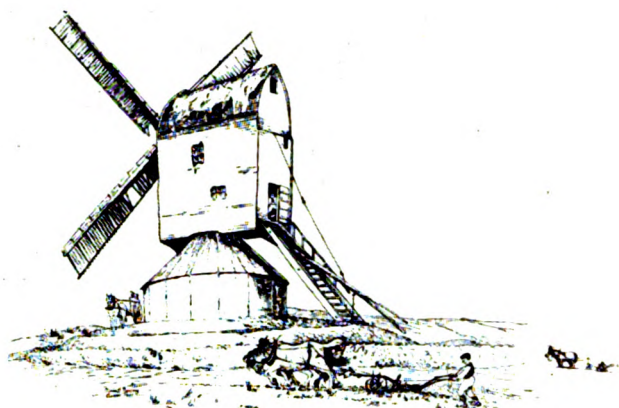
James Watt's governor, the well-known heavy iron balls and frame seen on most steam-engines, may be seen in every windmill; indeed, there are usually two or three of them, increasing or lessening the distance between the upper and nether millstone according as the mill is running fast or slow. The windmill governor is very heavily made, as it has a big load to lift, though it has a long leverage; it often has to raise over a ton.

The old mill at Carlton-le-Moorland had the usual sack-hoisting gear worked by friction off the sail-shaft, but evidently the shaft was often used directly by taking a turn of the rope around it, to judge by the deep grooves worn in it just over the sack hatchway. No doubt it was safe enough to do this when the breeze was very steady.

Besides the usual four sail, there are five, six, and eight sail mills, the latter only, I believe, in Lincolnshire; there is one with five sweeps at Gainsborough. But for picturesque qualities nothing equals the old four-sailer—the eight and even the six sail is too much like a wheel. In addition to free motive power, there is another great advantage in the use of a windmill—the miller himself can do the greater part of the repairs, occasionally calling in the village smith or carpenter. It is only for exceptional work, such as new sweeps and the like, that he has recourse to the millwright. Anciently the village smith probably made most of the ironwork for the local mill, and he still executes most of the repairs.



TOWER-MILL, GAINSBOROUGH.



MOUNTNESSING MILL.

Some windmills—that at Mountnessing in Essex, for instance—are perched on what looks like an artificial mound, but I do not think this is really the case. A post-mill concentrates a very heavy load on a small area, and would almost certainly settle considerably on “made” ground. A natural knoll was probably always taken advantage of, and the artificiality produced by levelling the circular trackway for the turning gear.

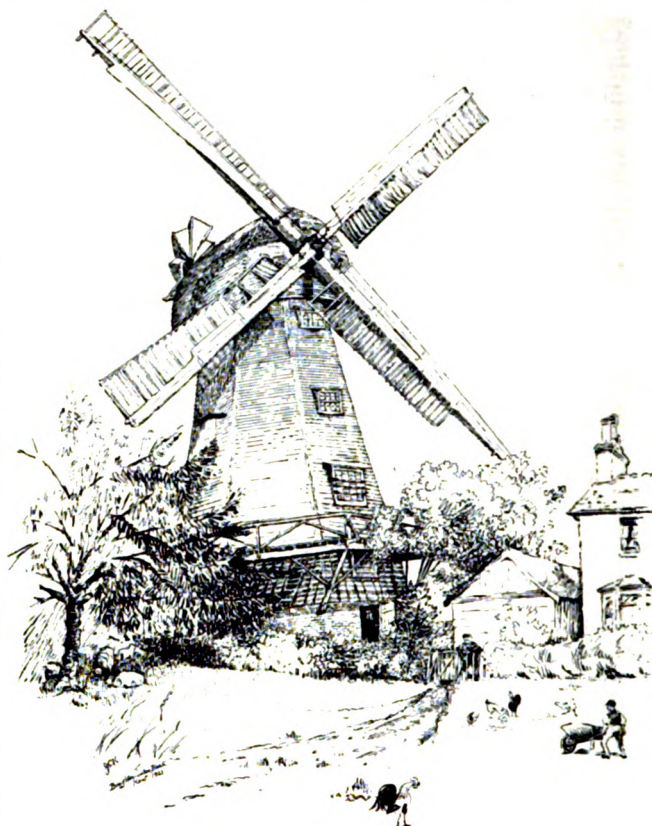
Being lofty and generally more or less isolated, windmills are frequently struck by lightning, the damage being, as a rule, very slight. It is true that an extraordinary number of windmills have been destroyed by fire, but this may be ascribed to the miller's spiked candlestick rather than any other cause. This utensil was a pan with a socket riveted to a bar which formed a handle at one end, the other being drawn to a sharp tang like that of a file. The miller would drive the tang into any handy timber whence the candle shed a convenient light, and not seldom he seems to have forgotten all about it till roused by an alarm of fire.

One windmill, just after the war, experimented with aeroplane or other rubberised material for sailcloth. It was not a success and soon perished; but it was a fine colour—the red of a Thames barge sail. Although the windmill gets his livelihood by selling flour, he is not a mere tradesman, but a craftsman, and has enthusiasm for things other than materialistic: most of them will point out the particular spot whence they consider their mill looks its best, and all of them possess numerous photographs of other mills, and not seldom a sketch of their own mill by some chance artist. I have often wondered if every village had its mill or mills, as in olden times, and if they could supply enough flour to our present-day population. Most millers are sure they could supply the villages, anyway; but, of course, this country could not furnish half the grain required. The number of days is few (perhaps three weeks in the year on the average) when there is not sufficient breeze to grind, and, of course, when there is pressure of work the mill is run day and night.

The term horse-power is no doubt a very indefinite one, although employed nowadays by engineers, and must be more unsatisfactory still applied to a windmill; but it may convey some idea that, with a good steady breeze, the smallest and largest mills are reckoned by the millers to vary from six to twelve horse-power. The Dutch and other Continental people who have to pay high prices for coal for power production are probably much in advance of us with regard to accurate data concerning the utilisation of wind power, though it is curious that nearly all Dutch mills are said still to use canvas instead of louvered sails. In Holland, of course, windmills are employed for driving all sorts of machinery. One mill in Kent during the war drove a circular saw for cutting up fire-wood logs, and seemed to do the work easily, even in a very light breeze.

The middlings are now generally made of Baltic fir or pitch pine, but oak was formerly used. The sweeps of windmills vary from about 50 to 80 ft. in length (tip to tip), and 6 to 10 ft. in breadth. The chief timber

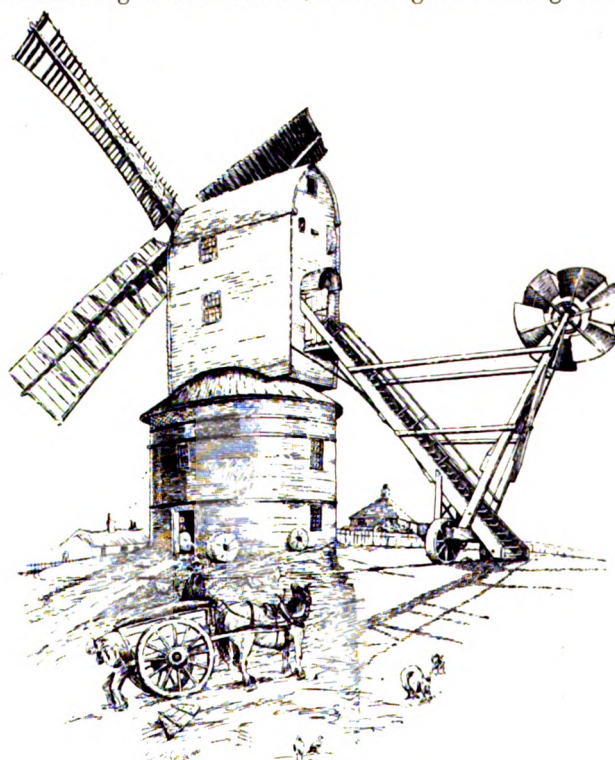
of the sweep is termed the whip, and the villagers seem to have confused whip and sweep and use the hybrid word “swip.” The round-houses of post-mills vary from square, octagonal, and polygonal to circular. The height of the wooden (Kentish) tower mills is generally 30 to 40 ft., and they usually stand on a brick structure 25 to 35 ft. square and from 10 to 20 ft. high, so that the total height of the tower would be 40 to 60 ft. But there are



BOUGHTON-UNDER-BLEAN.

a few mills exceeding these dimensions. The large circular brick towers of the Midland mills are 50 to 70 ft. and occasionally even 80 ft. in height.

There seem to be still extant a few curious instances where possession of certain land entails the obligation of maintaining a windmill thereon in good working order.



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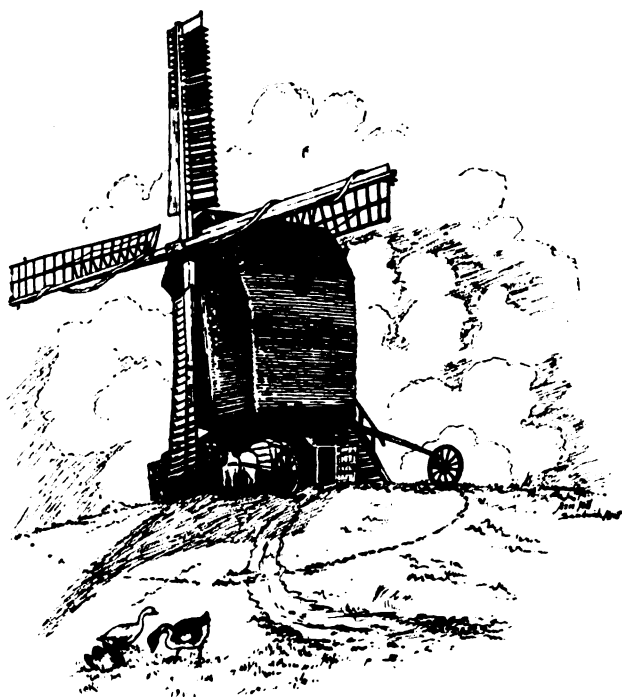
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ASH, NEAR SANDWICH: OLD POST-MILL.

There is one such in Kent, a post-mill which is well cared for and occasionally worked, but chiefly, it would appear, for the purpose of keeping it in running trim, lest bearings, etc., should rust up and become immovable.

One or two disused windmills have happily been restored recently, as regards their exterior, so that the old mill on Keston Common, Kent, and that at Wimbledon, for example, may still add charm for many years to their neighbourhood, as they have in bygone days. But since coal became so expensive several windmills in different parts of the country have been, and are being, put in working order; and although it is far better to have one restored externally than to allow it to vanish altogether, yet a working mill not only has that inscrutable difference inherent with things in use and the same things in a museum, but it has some magnetic power of attracting around it an epitome of country life, sights, and sounds. And to be entirely satisfactory a windmill must be a millwright's mill: windmills have been in existence so many centuries that their correct general proportions as regards utility have long been known and vary but little. I am sure that the great mill at Yarmouth (now pulled down) was not the work of real millwrights. The sails may have been bigger than ordinary, but they were dwarfed on the top of that monstrous brick tower like a factory chimney. The windmill at Chesterton in Warwickshire, designed by Inigo Jones, is not unpicturesque, but no millwright would have built a tower without any batter. But perhaps the mill was never meant to be used for its legitimate purpose. And freaks both in nature and art were ever more admired of the million than good design and proportion and fitting materials.

The brick substructure of dismantled tower mills has often been converted into a store or warehouse, and sometimes into a dwelling-house or cottage. The base of a large tower windmill at Frindsbury, near Rochester, was thus turned into two cottages about ten years ago, the roof being flat, and, as the tower was octagonal, the exterior presents many angles.

London County Council Housing Estimates.

The Housing Estimates of the London County Council this week provoked a protracted debate at the County Hall, in the course of which the Council's housing policy was vigorously attacked by the Progressive and Labour members.

The total estimate for the year on capital account was £4,163,150. On Rate Account the sum was £519,599.

Commenting on the complaints levelled against the policy of the Housing Committee, Mr. Edwin Evans, an ex-

chairman of the Property Owners' Association, said that, under existing conditions, it was almost impossible for private enterprise to go on with housing. In the Press it had been widely stated that houses could not be built for £300 each. The statement was nonsense. A house with a frontage of 12 feet 6 inches was not a house at all. He admitted that the housing difficulty had not been overcome, but the reason was that the class of houses built was far above the heads of the people who wanted them.

Mr. R. C. Powell said it would be better policy to build substantial houses which would last many years than the "hutches" now being erected, most of which would tumble to pieces in a few years. The reason for building this type of house was again "to give an opportunity to private enterprise." If the London County Council took steps to bring about the rating of empty property, thousands of pounds would be obtained for housing purposes.

The Estimates were ultimately adopted unaltered.

Artificial Lighting in Factories.

The third report of the Departmental Committee on Lighting in Factories and Workshops was issued yesterday. The Committee was appointed in 1913, and in their first report they recommended that there should be a statutory provision requiring adequate and suitable lighting in general terms in every part of a factory or workshop, and giving power to the Secretary of State to make orders defining adequate and suitable illumination.

In the third report the Committee, dealing with the use of translucent glass in factory windows, states that the problem requires investigation of a special character, involving psychological considerations, and such an investigation they had not been in a position to carry out.

Schedules were prepared by the committee covering processes requiring specially good lighting and described as "fine" and "very fine" work respectively. These, along with preliminary suggestions, were submitted to representatives of the clothing, textile, and engineering industries. The classification sub-committee met representatives of the employers and operatives in the cotton and silk industries in Manchester and Leeds, and measurements were made in a number of mills. The opinions of these industries and their own investigations have led the committee to conclude that they "cannot at present recommend the enforcement of legal minima of illumination for industrial purposes."

It is pointed out that the general standard of lighting in progressive factories has risen, and is rising, and that it would be unfortunate if a too rigid requirement, which must be placed low, tended to stereotype existing conditions or even give an excuse for depressing general practice. The committee recommend that a specification of minimum standards of illumination, as "recommended practice" for different groups of processes be issued.

After their investigation of the problems of mixed lighting, the committee state that no conclusive results were obtained, and here, again, lack of funds curtailed operations. Attention, however, is drawn to the undesirability of excessive lighting contrast between the surroundings and the points of work.

During the course of experiments on the subject of mixed lighting, the Committee point out that the unpleasant effects of undue contrasts between the illumination on the work and that on the surroundings had been brought to their notice. The workers complained of a feeling of strain when there was little general illumination overhead. The Committee add:—

"We wish to take this opportunity of drawing attention to the undesirability of excessive lighting contrast between the surroundings and the point of work."

Dealing with the effect of lighting on accidents, the Committee report that owing to the depression in industry the actual number of accidents had been reduced, and very few of them had been attributable to lighting conditions, as very little work had been done in artificial light.

The Committee were impressed by "the large proportion of fatal falls through ships' hatches due to inadequate lighting of vessels in dock while coaling or under repair," and also by several instances in factories of accidents due to machinery in which a shadow cast upon a danger point was a contributory cause. The Committee are of opinion that a further detailed investigation of accidents over a longer period, with special reference to lighting conditions, is desirable. They feel that such an inquiry would be specially valuable as regards accidents due to "persons falling," which form a large proportion of the annual total of accidents reported to the Factory Department.

The latest published return, that for 1920, shows that of 138,702 reported accidents (1,404 being fatal) 17,393 (372 fatal)



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were due to "persons falling," including 1,175 (40 fatal) which occurred in docks.

In conclusion, the Committee state: "While we hope that the adoption of the recommendations made in this report will tend to secure more adequate lighting in factories generally, we desire to point out that in our opinion much work will remain to be done before the regulation of factory lighting can be established on a basis of definite legal minima for illumination. We think, indeed, that if hardship to employers and much administrative difficulty is to be avoided, any such regulation should be preceded by a careful and systematic inquiry conducted on two main lines:—

(1) The collection for every process concerned of a sufficient number of observations to give some indication of the best existing practice; and

(2) Experimental research with the object of discovering the condition of illumination desirable on physiological and psychological grounds.

"In this respect we feel that, having regard to the wide field to be covered and the complexity of the problems to be considered, little real progress can be expected so long as the whole onus of the work rests upon a single centralised committee. In particular, the data we have been able to obtain, extensive as they are, are still incomplete in certain industries, even for the specification of advisory standards. We have, for instance, been unable to examine the important subject of the lighting of shipyards, while numerous smaller industries and processes remain to be investigated.

"Ample proof is now forthcoming of the relation between lighting on the one hand and production and safety on the other, and it seems to us not unreasonable to expect active co-operation on the part of all the principal industries in which lighting is specially important.

"We suggest, therefore, that on the acceptance of this report the principal industries should be invited to assume partial responsibility for the scheme by arranging for the collection of the actual data, possibly through the research associations where they exist. These data, when properly collated, could be used to afford some indication of existing practice, and would form a valuable complement to the more fundamental problem indicated in part (ii) of the scheme, which should remain under the immediate control of the Committee.

"Owing to existing economic conditions," it is added, "we are precluded from dealing with these questions at the present time, but we hope that every effort may be made to secure the continuance of our work as soon as circumstances allow."

General.

Furness Abbey has been taken over from Barrow Corporation by the Board of Works, and becomes a national monument.

Cardiff Education Committee have instructed the City Engineer to prepare block plans for an elementary school at My-nachdy, and for a secondary school at Grangetown.

Mr. William Larkins Bernard, F.R.I.B.A., late of Bristol, died on July 1 at Dulwich, aged seventy-eight. The deceased was elected a Fellow in 1889 and retired from practice in 1913.

Hamilton Dean of Guild Court last week passed plans presented by the Town Council for the erection of 52 houses on the site at Morris Street and Downie Street, being part of the burgh's housing scheme.

After a discussion lasting nearly three hours the Brighton Corporation decided by 28 votes to 16 to lease the Aquarium for 60 years to the Southdown Motor Services for conversion into a garage. A proposal to postpone the decision for a month to take a referendum of the ratepayers was rejected.

Mr. Firth Winterbottom, of Oldham, was elected president of the North-western Federation of Building Trade Employers at the annual meeting of the Federation, held at the Town Hall, Oldham. There are 69 local associations affiliated to the Federation. Mr. Tom Howarth, of Rochdale, was the retiring president.

A deputation representing the Royal Institute of British Architects gave evidence, on June 21, before the Royal Commission on the government of Greater London in the Middlesex Guildhall. The deputation, which was headed by Sir Aston Webb, P.R.A., Past President, consisted of Professor S. D. Adshead, Major Harry Barnes, M.P., and Mr. W. E. Riley.

At a meeting of the Mersey Docks and Harbour Board on the 29th ult., Mr. R. D. Holt, the chairman of the Works Committee, submitted details of a scheme which the Committee contemplated carrying out at the Gladstone Dock extensions. The work comprises large ferro-concrete sheds on the quays of numbers 1 and 2 Gladstone branch docks, at present under construction, and the excavating of the body of the dock, the building of dock walls, and other work. The estimated cost of the sheds is just under £400,000, and slightly over £400,000 for the other parts of the scheme.

Trade Notes.

Messrs. Champion, Druce & Co., 6 Laurence Pountney Hill, Cannon Street, E.C., who are makers of dry colours for all purposes as well as being white lead corrodors, have produced a permanent Green Gloss paint and undercoat, both ready for use. We have seen a pattern of "Roelae" and can testify to its beauty as a finishing varnish paint.

The Limmer and Trinidad Lake Asphalt Co., Ltd., have sent us some details of the sub-contract they carried out at the Switchworks recently erected at Witton, Birmingham, for the General Electric Co., the buildings of which were illustrated in our issue of June 30. The work consisted of asphalt lining to basement and subway and a considerable area of roofing. This latter included a large section of "Tropical" asphalt specially manufactured to withstand the considerable heat occasioned by the impregnating room immediately above which it was laid.

The conscious performance of a useful service is frequently its own reward, but it is, nevertheless, gratifying to find appreciation of that service in those who are most qualified to judge of its value. We frequently receive grateful tributes to the helpful information in our weekly list of current prices for labour and materials in the Building Trade. Evidence that this is regarded as authoritative is provided by the fact that Messrs. Kerner-Greenwood & Co., Ltd., of King's Lynn, have made use of it as a basis for a comparative analysis of costs. This analysis is set forth in detail in a newly published circular and shows that a monetary saving of over 40 per cent. in the cost of drain pipe joints is effected by using cement and sand mortar, waterproofed with "Pudlo" Brand powder instead of neat cement as formerly.



The above photograph shows the interior of a house at Sarria, Spain. The woodwork throughout the house has, we understand, been stained with "Solignum," and it is a feather in the cap of the makers of this excellent material that such a conservative people as the Spaniards should be added to their clientele. Another photograph has been received showing a plant erected by one of the Spanish Railway Companies for dipping their sleepers in "Solignum," which they are using extensively. It is satisfactory to learn that all the business abroad is not going to the Germans.

Amongst the wills recently proved were those of Mr. Lacy William Ridge, of Liverpool Terrace, Worthing, architect and surveyor for the Diocese of Chichester, formerly a member of the Holborn Borough Council, whose will has been proved at £2,498, and that of Edward Lawrence Marr, of Liverpool, builder and contractor, at £24,795 (net personalty £19,580).

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HOOP OP CONSTANTIA.

South African Houses.*

Miss Fairbridge has written a book which forms a most valuable contribution to a little-known chapter of architectural knowledge, and has well described the character of one of the most interesting phases of architectural development. It is curious to reflect that while our own contribution to colonial architecture became the starting point in the architectural history of the United States, architectural developments within the Empire itself should be French traditional building in Quebec and the Dutch colonial architecture of the Cape. The close of the Napoleonic wars was marked by the final cession of the Cape, but the imprint of Dutch rule was ineffaceably left on South Africa, and its historic houses form an interesting chapter in the development of an art. That imprint is so suitable and characteristic of the wants of the country that it is to be hoped that our countrymen there will follow Mr. Herbert Baker's example and do what they can to perpetuate traditions which were based on the vernacular architecture of Holland transformed and modified to suit the wants of another continent.

The book is both delightfully written and replete with good description and historical allusions and well illustrated, both by a fine collection of photographs and some good colour reproductions from oil paintings by R. Gwelo Goodman, as well as a fair number of line drawings showing characteristic details. The architecture of the Cape, like that of the Spanish and Portu-

guese colonies, is that of the mother country modified both to suit new requirements and to meet the needs of a people whose wants were simple, and who had no great available command of skilled labour. Ornament is sparingly introduced and usually concentrated on the design of doors and the characteristic gables, and proportion and mass are relied on to produce marked effects. The houses shown are usually one-storied, the greatest departure from European precedent being in the arrangement and their planning; a large number of buildings take the form of the letter H laid on its side, of which the centre division corresponds to a great sitting room, the outer ends of which are marked by dominating gables, while the side wings contain other smaller rooms and are likewise terminated with gables. Fireplaces are usually absent, and the large sitting room is divided by cross screens into two or more sub-divisions. The materials used are brickwork covered with plaster and thatched roofs. In the immediate neighbourhood of Capetown the houses usually took the form of a square U, with a garden or courtyard between the wings. The stoep, or platform, in front of the buildings is sometimes shaded by a grape vine trained over columns, but more often depends for shade on neighbouring trees; the verandah, as we know it, being practically unrepresented in the old Dutch work.

At a later date square flat-roofed houses, with simple Renaissance detail, were built, but these are more commonly found in towns than in country localities. Though casements were used in the earlier houses, square-headed sash windows divided into small panes became

* "Historic Houses of South Africa." By Dorothea Fairbridge. With a Preface by General J. C. Smuts. London: Humphrey Milford, Oxford University Press. £3 3s. net.

characteristic of Dutch South African architecture, and with well-proportioned doors with delicately detailed and quaint fanlights form its characteristic features. The transome separating the door from the fanlight over is frequently curved with very marked effect. The first South African architect of whom indication can be found was J. Meerman, whose name is attached to the drawings of a church at the Paarl, in 1714, but in the latter end of the same century the greatest architect connected with South Africa was Louis Michiel Thibault, a Frenchman in the employ of the Dutch East Indian Company, the decoration of whose buildings was often carried out by Anton Anreith, a sculptor or carver of marked power and originality.

The main part of the book is taken up by illustrations and descriptions of a long series of houses in the Cape, of which perhaps the finest is that of Groot Constantia, the great house of Simon van der Stel, who arrived in the Cape as Commander in 1679 and was in later years promoted to the position of Governor. This forms one of a group of houses, of which the Hoop op Constantia, said to be built for the accommodation of Government officials who sought relief from the heat of Government House, is another, and the delightful little Klein Constantia, reported to have been built by van der Stel for his daughter, a third.

Another notable series are the houses built by French Huguenot refugees in what was called the Coin Français, and now the French Hoek are marked by their names, such as Burgundy, Lormarins, Bien Donné, Rhone and La Provence. These conform to the South African type, though traces of French feeling characterise the detail of many and notably Lormarins, Rhone, and La Provence. The author touches slightly on Groote Schuur, the great house rebuilt by Herbert Baker and so intimately connected with memories of Cecil Rhodes, rightly considering it has been sufficiently described elsewhere. It will always be remembered to his credit that Cecil Rhodes, more than any other man, felt and appreciated the merits of the vernacular architecture of South Africa, and did what he could to prevent its obliteration and destruction.

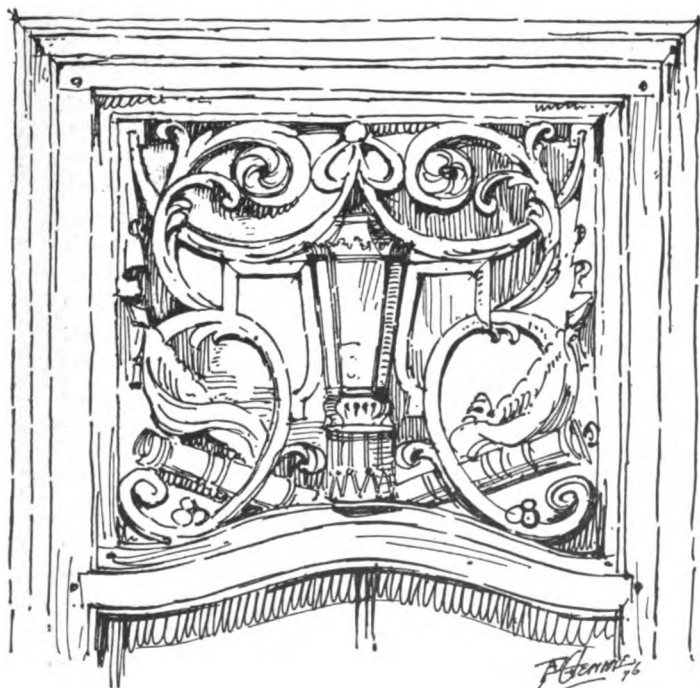
It is to be hoped that those who possess these beautiful and interesting houses will be checked by the force



STAIRCASE AT LEEUWENHOF.

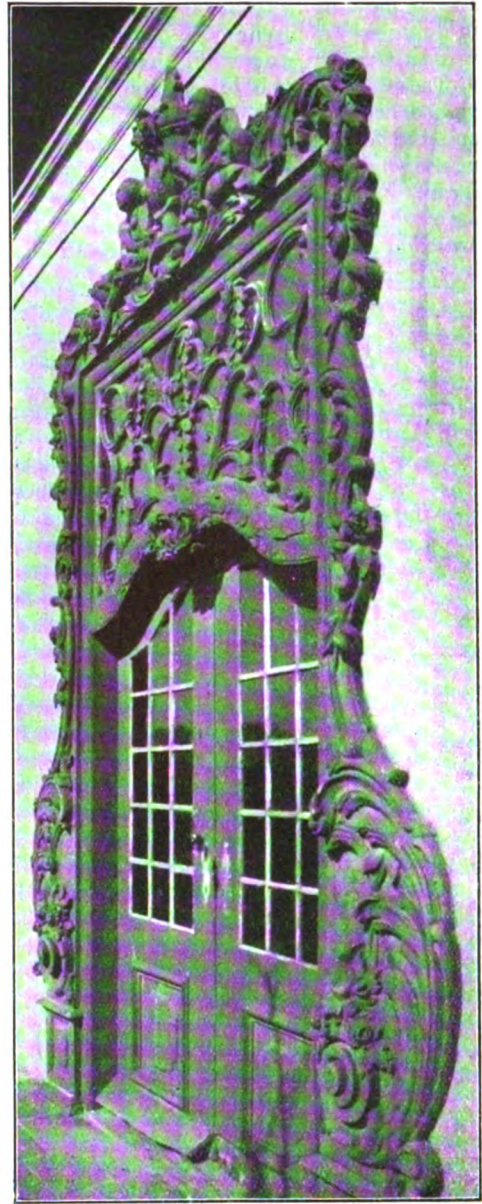
of public opinion from destroying or altering their features, for many of them are doubtless unaware of their value, a value which may be translated even in a new community in commercial terms, for there are an increasing number of people in every land who are eager to possess and inhabit dwellings which have descended to us from the historic past, and which by their beauty often inspire the designers of to-day.

The value of the work illustrated and described lies in its marked simplicity, and once more proves that elaboration and intricacy need not characterise good architecture, and that our colleagues in the Cape need not always depend on Europe for an inspiration which they can obtain from the vernacular work of the Dutch settlers whose instincts led them to a perfect solution of the problems they had to meet.



FANLIGHT IN TEAK FROM THE IMHOFF BATTERY, NOW AT GROOTE SCHUUR.

At the last meeting of the Governors of the Royal Technical College, Glasgow, Mr. T. Harold Hughes, A.R.I.B.A., A.R.C.A., F.S.I., who had been acting as temporary Director of Architectural Studies during the late Professor Fulton's illness, was appointed Director in the School of Architecture, and Professor of Architectural Design in the School of Art at a salary of £700 per annum. In 1910 Mr. Hughes (then at the age of 23) was appointed head of the Architectural Department, Robert Gordon's College, Aberdeen, where he organised a new day school for architectural students in co-operation with the Aberdeen Society of Architects.



DOOR AND WINDOW AT THE NORMAL COLLEGE.

Notes and Comments.

The Defence of a Theory.

The supporters of Mr. Macody Lund are obviously annoyed because we have shown scepticism. We demonstrate that lines shown on a plan are wrong and we are urged to admit that those shown on a section of the same building are correct. We are asked to believe that the fact of reputed right angles not being right angles is a permissible and unimportant error. We do not admit this, because it is easier to lay out a correct right angle on the smallest of diagrams than to slightly depart from it to prove a theory. But many other diagrams in the work besides those we have instanced are incorrect, while the author is willing, if he can work in his sacred squares, to see his lines correspond in some cases with the centres of walls and at others with their internal faces. Sometimes the theory of Mr. Lund is more easily proved one way and sometimes in another, and he obviously takes the solution which best suits him. As we have said, we can see nothing very wonderful in a series of similar buildings closely approximating to the same proportions; it is what we should expect. Neither do we admit that, assuming the correctness of the author's hypothesis, the result has been that the proportion of mediæval buildings is almost perfect. On the contrary, we should say that a very large number of our buildings, as well as many foreign ones, have marked defects in their proportions, and that there was no trace in their design of such a system of ordered rule as has

resulted in making the classical column—save when it is designed by the ignorant—a form which completely satisfies the eye. We should define the merits of mediæval architecture as depending more on general conception, effects of light and shade and beautiful detail than on general proportions, which, we assert, are frequently faulty, though perhaps hardly to the extent of the more difficult and intricate problems, which are what we have to solve to-day. We wonder if Mr. Lund has analysed Liverpool Cathedral. If he has, it would be interesting to hear what he has to say about it, and then to ask Mr. Scott what he has to tell us of his methods of design.

Lyveden New Building.

Lyveden New Building has passed into the hands of the National Trust, but we quite agree with Mr. C. R. Scott Moncrieff that it would be far better if this famous unfinished house could be completed and occupied by an owner who would appreciate the beauty of this interesting early Renaissance building. Fifty years ago such an attempt would have resulted in the addition of work which was incongruous and inconsistent with the original structure; now there are many architects whose work would be so much in keeping with that of Sir Thomas Tresham's builder that no one could tell the difference between them in after years, while the internal treatment of the house would be equally harmonious. The best way to preserve

an old building is to use it; nor need we greatly mind if in doing so we obscure the division between old and new work. Our ancestors would have been amused at present-day scruples on such points, for buildings in the past were valued because of their merits and the uses they fulfilled, and the foolish adoration of antiquity *qua* antiquity was not thought of. And while there is no reason why we should be too precise in imitating the work of a certain date when adding to an old building, in such a case as Lyveden an architect would not be in any way hampered by adherence to the original type of design.

Indian Art.

At a conversazione of the India Society, Professor Rothenstein said it was strange that England had not before other European nations realised the importance of Eastern art. Even to-day, while Japanese and Chinese sculpture occupied the minds of our collectors, there was a very imperfect understanding of the importance and significance of Indian sculpture. Yet it was the ingeniousness of Indian invention, both of form and subject-matter, which fertilised the whole of Chinese and Japanese religious art. For instance, the invention of the Buddha figure was one of the greatest inspirations which had entered the mind of the artist.

The Victoria and Albert Museum and the British Museum, he continued, certainly contained beautiful examples of Indian art, but more than this was required. European scholars unable to travel in Asia should find in London a centre of Eastern artistic culture. He pleaded for a collection of casts, worthily housed, of the masterpieces of Indian art. A building containing the India Office library, a noble collection of Indian painting and sculpture, and objects of art should form a centre where Indian and European students could meet on common ground.

We hope that these suggestions will bear fruit, as both architects and the public seem to be often deterred by the unusual, and there are elements of richness and fancy in the best Indian art in which it is probably superior to that of civilisations we know more about.

The American House.

Mr. Charles S. Keefe has compiled a book of illustrations of American houses recently built under the above title which gives a good idea both of the strength and weakness of contemporary American design, and is conveniently grouped into types. The best American houses are those which are built on simple classical lines, like that of Ernest Allen at Louisville, of which Lewis Colt Albro is the architect, and that built for Mr. Walter C. Bayliss at Taunton, Mass., by Messrs. Parker, Thomas & Rice, architects. In these two types, the ordered classical house and those founded on Colonial precedent, the greatest success is

achieved. To these we might add the fine house based on Spanish traditional lines, many of which are found in the West.

But where American architects attempt to base their designs on Tudor or earlier precedents of English character they almost uniformly come to grief, producing results which remind us of the unfortunate examples we have here of the work of the 'seventies and early 'eighties of last century. These houses might almost be described as the work of elementary students or amateurs, and it is to be hoped that American architects will either abandon the attempt to do what is evidently alien to them or give more time and study to the English precedents, which they do not yet seem to understand.

Sir Reginald Blomfield.

In writing to "The Morning Post" on modern London architecture Sir Reginald Blomfield has said much with which we are in hearty agreement, especially in his condemnation of clothing so many of our buildings in a French manner. We agree that this manner will never be liked or understood by the average man, and that the work of the English architects of the eighteenth century is a far safer precedent on which to base the design of modern London. And we fully agree with him that although Portland stone is one of the finest of materials it would be better to employ more brickwork in London, and that it would have been better had the Crown authorities permitted its use in Regent Street instead of insisting on the adoption of a skin of stonework. But we are afraid that Regent Street is now past redemption, and that we shall have to wait for the falling in of another series of leases before we can get what is wanted—a series of quiet, uniformly designed buildings of one height which will give full effect to the dignity of the great thoroughfares now spoiled by the ostentation and irregular heights of great new buildings.

"The Architect" Fifty Years Ago.

JULY 13, 1872.

A NEW HOSPITAL FOR PARIS.

The plan for the construction of a great hospital at Ménilmontant, which was put forward some years since, has been taken up by the Municipal authorities. The cost of the whole is estimated at £360,000, but only £40,000 is to be voted this year. The position chosen for this new hospital is admirable; Ménilmontant is in the twentieth *arrondissement* of the city, that is to say in the outer zone, in the midst of a very populous district, and at a considerable distance from other hospitals. Moreover, the site possesses the advantages which are so much complained of as wanting in the case of the new hospital of the Hôtel Dieu. It is removed from the centre of the city, as well as from the neighbourhood of the river; and, while the latter is almost on a level with the Seine, and surrounded by houses, the former will occupy an elevated and unencumbered site.

Our Illustrations.

THE LONDON COUNTY HALL. RALPH-KNOTT, F.R.I.B.A., Selected Architect, and W. E. RILEY, F.R.I.B.A., M.Inst.C.E., R.B.A., Council's Official Architect.

S.S. "SAMARIA": CUNARD STEAMSHIP CO., LTD. MESSRS. WILLINK & DOD, Architects.

The "Samaria" is the largest liner ever built on the Mersey and belongs to the new type of single-funnelled oil-burning ships. Her total length is 623 feet and gross tonnage 20,000 tons, and her sea speed is 16 knots. The "Samaria" contains accommodation for nearly 2,600 passengers—336 in the first class, 340 second, 400 third and 1,504 steerage. Her public accommodation, for which see our illustrations, comprises Dining Room Lounge, Smoking, Drawing and Writing Rooms, and Garden Lounges for first class passengers; Dining and Drawing, Smoking Rooms and Verandah Café for second class passengers; Dining, Smoking and

General Rooms for third class passengers. The work we illustrate was designed and carried out under the supervision of Messrs. Willink and Dod, architects, and is very effective, having marked merit both in detail and general proportion. Amongst the various sub-contractors employed were the Kingsmill Art Metal and Electrical Co., of Fulham Road, South Kensington, who supplied the wrought iron balconies, lift enclosures, wrought iron grilles and electrical fittings; Messrs. George Jackson & Sons, who carried out the decorative plaster work, and Messrs. John Stubbs & Sons, of Liverpool, pavings and marble work.

London Art Galleries.

(All rights reserved.)

The exhibition of some fifty oil paintings and oil sketches of Tunisia by Baron D'Erlanger in the "Hogarth Room" at the Leicester Galleries is worth a visit. The work here is very clean and fresh in colour, and the technique quite good. Two attractive paintings, to which this specially applies, are of a street and the Souk in Sidi-bou-Said, which must be a delightful Moorish village; and the same might apply to the two terrace views of Nedjma-Ezzohra, looking out across a lovely bay. The portrait of Baroness D'Erlanger, next to these, painted against a background of sky, is cool and luminous, and that of Mr. Bérard full of character. The small oil paintings are obviously mere studies or notes of colour and composition, but are often charming, notably in such subjects as "A view of Sidi-bou-Said" and "Tourki."

But the special interest in the present display at the Leicester Galleries centres, of course, in the really admirable selection of drawings which occupy the first two rooms, and which, I understand, for the most part belong to the Galleries, though some are from private collections. We begin with the Dutchmen, with Adrian van Ostade, a pupil of the great Franz Hals and a master of "genre," and his brother Isaak, the head of a youth by Adrian being admirably drawn in red chalk; and near these are figures by Aelbert Cuyp, probably intended for introduction in his landscapes, and by a no less great Dutch landscape master, Jan van Goyen, whose paintings are notable for their cool grey tonality. Next we find the great marine painter, Willem van de Velde, called the Elder, in a little drawing of "Shipping in a calm"; Wouwerman, and a pupil of Jan van Goyen, but himself a master of "genre," delighting in scenes of carousals and somewhat coarse humour, with that joy in material things which is characteristic of the Dutch masters; Jan Steen, in a very typical group of three men and a woman.

But the exhibition is essentially eclectic, and we come next to J. B. Pater in studies of figures in red chalk—with a sharp angular treatment of the draperies which reminds us of Watteau, and belongs to that time—Boucher and Greuze, G. B. Tiepolo ("A Death of Cleopatra," boldly handled in sepia and wash) next to John Raphael Smith and Downman, Thomas Rowlandson in a clever "Lesson in Anatomy," Angelica Kaufman, whose "Girl with an Urn" here is stronger in drawing than is her wont; then the pre-Raphaelites, Rossetti, Holman Hunt, Madox Brown, Burne-Jones ("Pandora's Box," 1894), J. McN. Whistler beside Hokusai, among the Frenchmen Pissarro, Degas, Steinlen and Forain, in figure studies Augustus John, Sickert, William Strang (an admirable nude in coloured chalks), Tonks and Orpen. I noticed particularly a drawing ("Market Place") by Constantin Guys, lent by Mr. Konody. The whole exhibition, numbering in all 132 drawings, is of great interest, well arranged, and meriting careful study, for we often get closer to the artist in these first direct impressions of his mind than in the finished painting.

The Summer Exhibition at the Goupil Gallery possesses a good deal of general interest in paintings by Maurice Denis, who has a show to himself in the French Pavilion this year at Venice, by Vuillard, who has two flower-pieces, of which "Fleurs dans une Vase" is far the best, and by Sisley, whose "Au Bord du Loing" may be compared here with Wilson Steer's admirable "Harbour Entrance." William Nicholson is good in his Paris subjects, "Aux Champs Elysées" and "The Drummer of the Tuileries," as well as a still life, "The Glass Bowl;" and there is a delightful Monet, luminous and cool, "Vernon en Brouillard," beside Edward Stott's twilight scene of "Saturday Night."

But the attraction of this Gallery at this moment is the sculpture of Eleuterio Riccardi, who comes before our London public in this display. We have had so many new sculptors shot upon us of late that one is disposed to be critical, but I found this feeling disarmed by the obvious merit of Riccardi's work. The small gallery contains

work shown before (I recollect quite well the "Peppini Garibaldi"), but in the large gallery the bronze "Surprise" recalls something of the gaiety and fresh life of Donatello's "Child with the Dolphin," and the "Nymphe" (another bronze) swings round upon her hips with a splendid sweep of movement, while her tense muscular form is as finely conceived as that of the bronze "Pêcheur" is conventional and uninspired. That is to say that the artist is unequal, and is perhaps at his best in his portrait busts, such as "Miss Winnie Birkbeck," "Lady Ancaster," "The Duchess of Sutherland"—this last somewhat affected in pose—the Hon. Doris Peel (in bronze), and, above all, the wax portrait bust of "Mrs. Jefferson," which for subtle modelling I feel as one of the best things here. "Le Sourire," on the other hand, is one of his failures; that smile ought never to have been perpetuated, and I venture to express a doubt that the human form could ever contain such angles as in this neck and clavicles. In sum, the work here is brilliant but uneven, the "Détail d'Architecture-Relief" being one of the successes.

To Tom Mostyn's paintings of Devon the Fine Art Society have just added a little group of oil paintings of California and South Carolina by William P. Silva. This artist has, I believe, recently shown in the Simonson Galleries of the Rue Caumartin, in Paris, and his "Noon" shown here gained "mention honorable" in this year's Salon. He gives an impression of lovely colour and rich vegetation in such subjects as "The Golden Shore," "Cliff Dwellers," and "Dryads of Lobos," these last being not wood nymphs but pine trees. One feels tempted to fancy that if Mr. Mostyn could pack his trunk and cross over to California he might find colour schemes as fine as—perhaps even better than—those of "Glorious Devon."

The annual display of Early English water colours at Walker's Galleries is fully up to (and this is high praise) its usual level. I propose to return later in more detail to these paintings, but will mention here some outstanding features, notably the two wonderful De Wints—"Bridge and Mill" and "Cattle" resting in the shade. There are only two Copley Fieldings, but these are particularly choice ones, notably the "Seascape," and a feature of great interest is the group of ten landscapes by Dr. Monro, lent by his great-granddaughter. Dr. Monro, as my readers will remember, was the friend of Turner in his young days, and it was in his studio, "with its atmosphere of classical scholarship and taste," that Girtin, Turner, and Cotman met to study Cozens's drawings.

The British Pavilion in the Brazilian Centenary Exhibition at Rio de Janeiro has been illustrated in an earlier issue, but it may be of interest to note that Mr. Charles Sims, R.A., was responsible for the three superb panels which are to decorate that Pavilion. He had, as I understand, only six weeks to complete his work, but those who have seen these panels of "The North Sea," "The Indian Ocean" and "Pacific," speak enthusiastically of their decorative quality.

I have frequently had occasion in these columns to mention the work of Mr. F. L. Griggs in terms of commendation, and it is a great satisfaction to find him among the newly elected Associate Engravers of the Royal Academy, beside Mr. Macbeth Raeburn, who has been doing some admirable work in what has been described as mezzotint in colour. A fine example is his print after Henry Raeburn's grand full length of Sir John Sinclair of Ulbster.

S. B.

The Archbishop of Canterbury presided last week at a lecture delivered in Carpenters' Hall by Mr. W. D. Caröe on "Old London Bridge," in connection with the movement to preserve the recently discovered arch of the first stone bridge for London, one built by the monk Peter of Colechurch, and finished in 1209. A resolution moved by Mr. E. Walker, seconded by Mr. A. J. Taylor, L.C.C., urging the advisability of preserving the arch, was carried unanimously.

Modern Methods in Building Construction.—XXV.*

By **Albert Lakeman, M.S.A., M.C.I.**

WATER SUPPLY.

The preliminary and foundation work in a large building scheme cannot be considered as complete unless the provision of the permanent water supply has been dealt with, because the installation of this supply will demand the execution of certain operations at an early stage in the scheme. If it is arranged to obtain the supply from the authorities in the district or from a local water supply company through mains which are already in existence the work involved will probably not be extensive, but if no such supply is available, or if the cost of the water so used is considered excessive, it will be necessary to instal an independent water supply which may involve considerable work that will require a comparatively long time to execute.

A plentiful and reliable supply of good water is obviously of primary importance in all large commercial undertakings where manufacturing operations are carried on, and drinking and general sanitary requirements must also be provided for. In the case of factories situated near a large river or natural lake it will frequently be feasible to lay pipe lines and instal pumps which will ensure a sufficient water supply for all manufacturing and fire installation purposes, but when this is not possible a deep well can usually be bored to meet all ordinary requirements.

The use of surface wells, at one time quite extensive, is now generally abandoned, owing to the unreliability of the supply in dry seasons and the danger of pollution; the latter being especially serious when the water is intended for general domestic use. The temperature of the water is also an important factor, whether the supply is for domestic or manufacturing purposes, and with a deep well it is possible to obtain water in large quantities at a low temperature and of a pure nature. When a supply is available from the authorities the question of the cost of the water required will need to be considered in order to ascertain whether the capital outlay for an independent supply is justified, and in many cases it will be found that a large saving will result to the building owner if a deep well is provided to give this independent supply, instead of taking the water from the public supply. It is very difficult to state definitely the cost of the installation and pumping for an independent supply unless all the conditions are known, but the capital outlay for many of the important buildings in London, including the sinking of the well and the provision of the pumping plant, varies from about £1,500 to £4,000 where the supply of water varies from 1,000 to 4,000 gallons per hour. The cost of pumping will depend on the lift required and the cost of the power employed, and it may be as low as ½d. per 1,000 gallons, but, in any case, it will be a very small sum compared with the price usually charged for water supplied by a public authority.

As an example in London, which gives about the cheapest

water in this country, the charges for manufacturing purposes vary from 6d. to 1s. per 1,000 gallons, according to the quantity taken; but for domestic supply, which covers many large business premises and banks, the charges are based at 5 per cent. on the rateable value. The charge for water in the case of a large building is enormous as compared with the quantity taken, and, in fact, is out of all proportion to the value of the water used. In the case of one large bank the water rate amounted to over £4,000 per annum, and the rate for any large building will probably exceed £200 to £600 per annum, so that the capital invested in a separate installation will be repaid in a few years. In London the water obtained from an artesian well will be extremely soft, having generally only about 5 degrees of hardness as compared with 16 degrees in the water supplied by the Metropolitan Water Board, and this is an important matter when considering the question of deposit in pipes, boilers, and fittings generally.

If the provision of an artesian well is decided upon it will be necessary to employ a specialist firm to execute the boring, as special plant is required, and it is essential that experts be engaged to carry out work that demands considerable experience. The position for the borehole must be determined at the outset, and space allotted for the pumps, as the foundation work of the building may be affected at this point. It is also important to commence the sinking operations at an early date to prevent delay to the structural work on account of the boring work, if the well cannot be located in an open space such as an area or courtyard which allows ample working conditions clear of the building walls and foundations. Advice should also be obtained from an expert regarding the likelihood of a sufficient water supply being given when the well is sunk, and at what depth the water will probably be found, as the chances of success and the magnitude of the undertaking must be fully considered before the preliminary operations commence. It will be understood that expert well sinkers will have a knowledge of the sub-strata in practically all districts, and the quantity of water that will probably be available at different depths, and unless the architect or engineer has previously executed work, including an independent water supply, in the vicinity of a new scheme under consideration, he cannot properly advise his clients in this special work without first consulting an expert. The well boring may be carried out by the percussion system or the rotary system, according to the nature of the sub-strata.

The percussion system will be found very reliable for boring in loose and friable soils and moderately hard rocks. In this system the various boring tools are attached to lengths of iron rod, which are lifted, dropped, and turned by hand or motive power, crushing the soils into a slurry or powder as they are worked up and down, after which the débris is removed by a sludge-pump. When water is available during the boring operations the hydraulic percussion system can be adopted, and this will be found expeditious for drilling through sand, gravel, clay and soft rocks. In this system the boring rods and the tool for boring are hollow, thus enabling water to be forced through them to the level at which the tool is operating. The rods and tools are lifted, dropped and turned in a similar manner to the ordinary percussion system, while the water is being forced down them and all the débris is washed to the surface. One advantage of this hydraulic method is that the tools need not be removed so frequently from the hole for the removal of this débris, and the deeper the boring the quicker the slurry is forced to the surface, as the increase in weight causes the tools to drop more readily. When the boring has to be carried through rocks or solid strata the rotary system will be found the most suitable. The rotary shot-boring gear made by Messrs. C. Isler & Co., of Bear Lane, Southwark, has been designed to replace the more costly method of diamond rock drills. The design is similar, the alteration being that, in place of expensive diamond set crowns, plain

* PART I.—I. Introduction, Steam shovels, Jan. 13; II. Steam shovels, Trench diggers, Jan. 29; III. Grab buckets, scrapers, Jan. 27; IV. Drag-line excavators, Feb. 3; V. Derricks and cranes, radial loader, paving-breakers, Feb. 17; VI. Surplus Soil Transport (Hand Labour), Feb. 24; VII. Surplus Soil Transport (Horse-drawn wagons, Steam-driven wagons), Mar. 3; VIII. Surplus Soil Transport (Steam-driven wagons), Mar. 10; IX. Surplus Soil Transport (Steam-driven wagons, Petrol wagons, Narrow-gauge track with wagons), Mar. 17; X. Surplus Soil Transport (Narrow-gauge track with wagons, Trucks on Standard-gauge track, Electrically-driven trucks and vehicles), Mar. 24.

PART II.—XI. Foundation Work (Ordinary soils, Soft soils), April 7; XII. Foundation Work (Soft soils), April 17; XIII. Foundation Work (Soft soils), April 21; XIV. Foundation Work (Soft soils), April 28; XV. Foundation Work (Soft soils), sheet piling, May 5; XVI. Foundation Work (Soft soils), steel-sheet piling, May 12; XVII. Foundation Work (soft soils), steel-sheet piling, pumping, May 19; XVIII. Foundation Work (Soft soils), pumping, May 26; XIX. Foundation Work (soft soils), foundation piles, June 2; XX. Foundation Work (soft soils), foundation piles (cont.), June 9; XXI. Foundation Work (soft soils), foundation piles (cont.), June 16; XXII. Foundation Work (soft soils), Waterproofing, June 23; XXIII. Foundation Work (soft soils), Waterproofing (cont.), June 30; XXIV. Waterproofing (cont.), July 7.

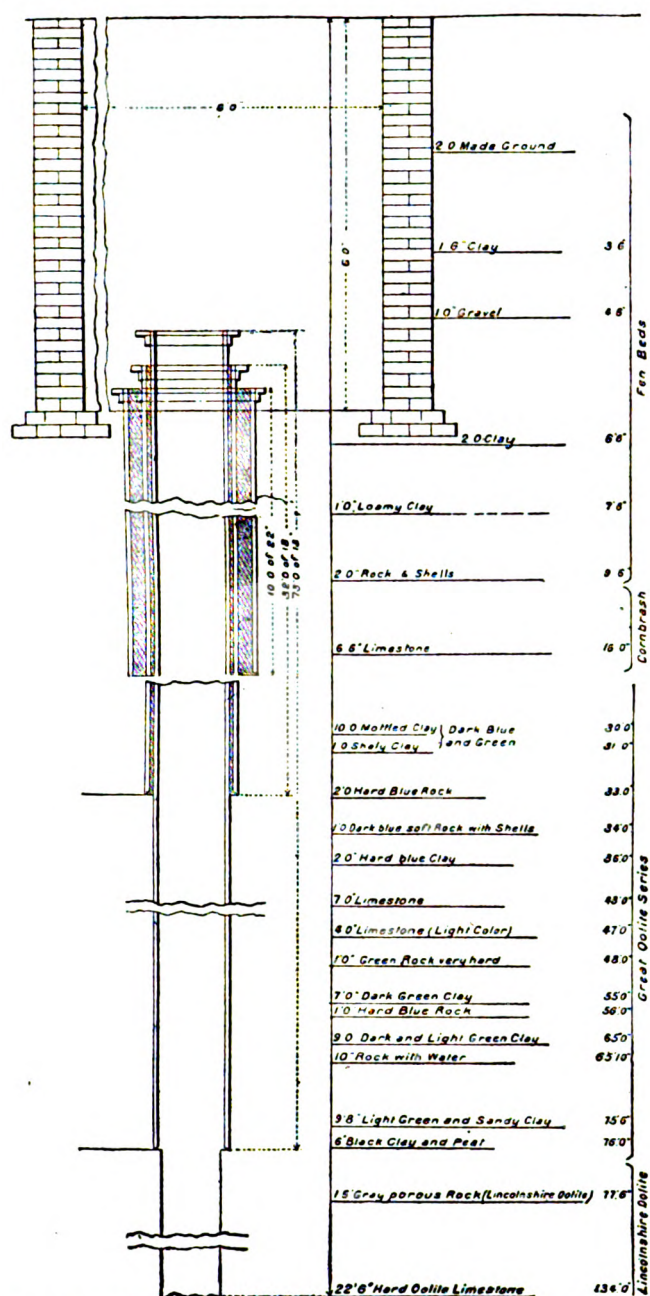


Fig. 140.—SECTION OF ARTESIAN BORED WELL AT BOURNE, LINCS.

crowns are used. The tools are rotated, chilled steel shot being fed through the hollow rods and thence under the boring crown, which, being rotated on top of the shot, rubs a path for the tool to travel in. Boreholes of large diameter and great depth are brought within a reasonable cost by this method, whereas the heavy cost of diamonds made the cost prohibitive with diamond drills.

When the strata to be bored are varied, consisting of hard and soft soils, or when the geological formations are not known, a combined percussion and rotary shot-boring gear can be used. The diameter of the borehole below the lining tube should be kept as near the same as possible. Before the well-boring plant is removed from the scene of operations the supply should be tested by means of pumping, and, in fact, it is advisable to test the supply when a certain depth is reached and before the boring is finished. Generally speaking, it is a good plan to carry the sinking down some distance below the level at which water is first reached, a distance of about 200 feet below this point often ensuring a permanent and continuous supply, and, in any case, an increase in the volume of water available is probable. The action of pumping will also frequently increase the volume of water coming into the well, as it helps to clear any crevices or fissures in the strata which may have become partially stopped up by the boring tools during the sinking; and if the yield at first is not good the pumping should be persevered with

for some time to see if an improvement will result. There are instances when pumping will fail to produce a good supply of water even when the depth reached is one which is considered by experts to be sufficient, and in such cases resort is sometimes had to the use of a powerful explosive to create a freer water-way to the well.

The explosive is applied in the form of a cartridge of the required size with detonator, which is lowered by a chain or wire to the necessary depth and fired from the top surface. The explosion shatters and opens up the rock immediately adjacent to the boring, and frequently results in an excellent supply of water where previously there was practically none.

An excellent example of the quantity of water which can be obtained from an artesian well is shown in the case of one which was sunk for the town of Spalding by Messrs. C. Isler & Co., the artesian well experts. This well was bored at Bourne, Lincolnshire, and it was arranged that the water should be carried, by gravitation, through ten miles of pipe line to the reservoirs at Spalding. When the boring reached 100 feet below the surface the yield was 1,872,000 gallons per day, and on the advice of Messrs. Isler & Co. it was decided to carry the well deeper, with the result that at 134 feet the yield was increased to over 5,000,000 gallons per day. The overflow was, in fact, so great that unless provision had been made to carry away the water into a dyke and thence to two rivers, the country around would have been flooded. Owing to the great pressure which exists, some of the boreholes in this neighbourhood allow a considerable amount of water to escape outside the tubes, causing unnecessary waste, and special precautions were taken in this instance, as shown by the section illustrated in fig. 140. It will be seen that three tiers of pipes were inserted in the boring, and each one was brought to the surface. They were each driven tightly into the soil, and the annular space was filled in with a specially prepared cement to give a water-tight lining. Previous to tapping the main springs, chalybeate water was met with at 65 feet from the surface. This was safely eliminated by the driving of the 13-inch pipes which are the main supply pipes of the boring. At a level of 78 feet 6 inches from the surface the main springs were tapped in the Lincolnshire oolite, the water rising very slowly and taking twenty-four hours to overflow from the well. When the boring was continued the volume of water rapidly increased, with the result that at 100 feet the supply was 1,300 gallons per

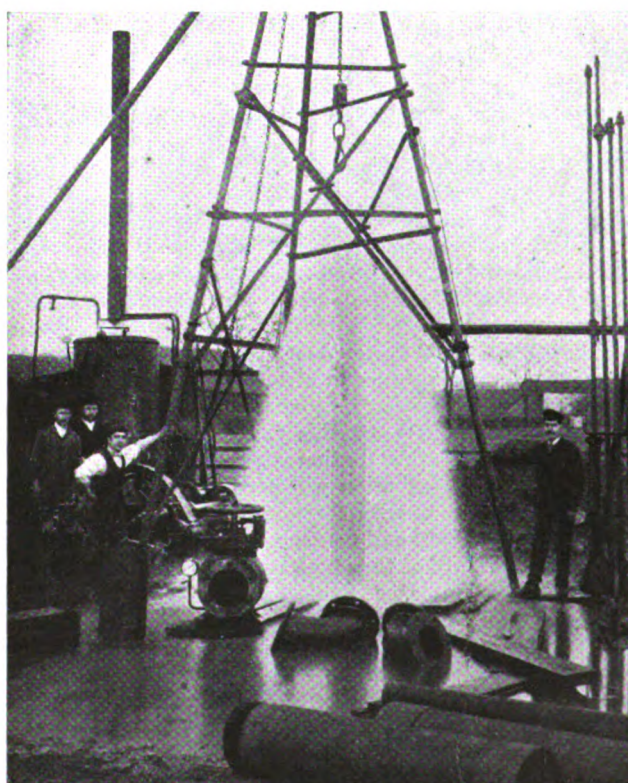


Fig. 141.—OVERFLOW FROM ARTESIAN WELL AT BOURNE.

minute overflow. At 120 feet from the surface the overflow was 1,800 gallons per minute, while at 134 feet the overflow was nearly double the amount—viz., 3,480 gallons per minute or 5,011,200 gallons per day. The pressure remained the same at each depth—namely, 10 lb. to the square inch. This example probably provides the record yield for springs tapped by well sinking in this country. An idea of the overflow can be gathered from the illustration in fig. 141.

The tubes used for the lining of the artesian well are an important feature of the work, and the permanency of the supply may be seriously affected by the use of inferior tubes. The jointed pipes which are available cover steel socketed, flush jointed, swelled and cressed, and Messrs. Isler strongly recommend the use of their steel socketed tube as being the most reliable after considerable experience

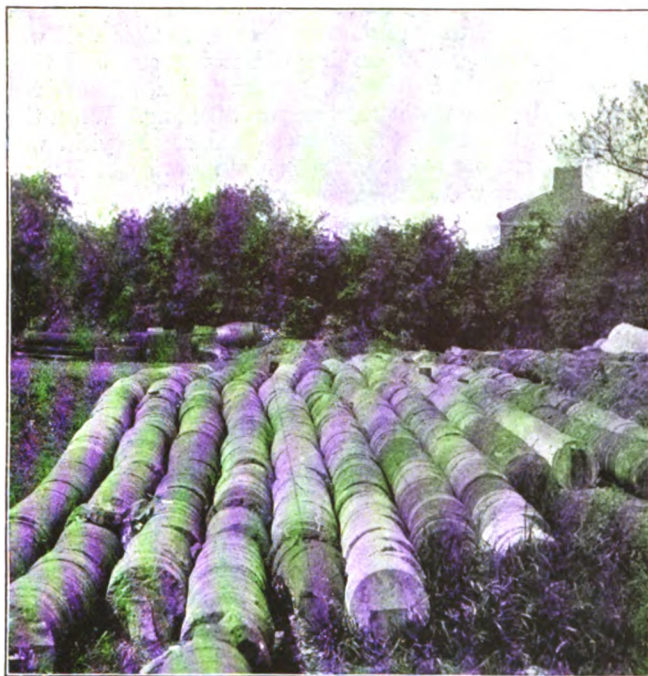


Fig. 142. SOLID CORES FROM WELL BORING AT PLUMBLEY.

with different types. It is claimed that by employing a steel socket, and swedging in the ends and screwing the tubes to butt, greater strength is obtained at the joints with a practically flush inside and outside tube having a continuous bearing for driving. The tubes are fitted with a special steel cutting shoe formed from a solid block.

The size of the bore will be governed by the quantity of water required, the type of pumping plant that will be employed, and in some cases the nature of the strata to be bored. Borings can be executed from 2 inches diameter upwards, and in special cases may be as large as 48 to 72 inches diameter.

An example of the solid cores that are obtained with the rotary shot-boring plant when passing through hard strata is illustrated in fig. 142, which shows those obtained when executing a 2,500 feet borehole at Plumley.

Numerous examples of interesting and successful artesian well borings both in London and the provinces could be given, but no useful object will be served, as the architect or engineer will generally be concerned with the possibility of a successful supply by this method in the particular district wherein the installation is proposed.

The pumping installation will need to be carefully considered in connection with the water supply from the well, and although no hard and fast rule can be applied, the most modern method will be the application of an air lift pumping plant, as it is a simple, economical and efficient type. There are no valves or movable parts fixed in the borehole, and the only working parts which are inaccessible are the air and discharge pipes, which are two open-ended pipes throughout. The risk of failure due to breakdown is, therefore, reduced to a minimum, and the working parts in the compressor which is fixed at the surface can be easily and quickly replaced or repaired when necessary. Generally speaking,

it will also be possible to develop a larger supply from a well by this system than by any other, provided, of course, that the water exists in the strata ready for development.

Many deep well pumps have been installed, and are successfully operating to-day, but they cannot be considered as the most efficient and modern method for raising the water. The pumping installation should be arranged and executed by expert well engineers, and it is advisable to combine the well sinking and pumping plant in one contract, as in this manner the best results are likely to be achieved. A general knowledge of water supply work as represented by artesian wells will always prove useful to the architect who finds it necessary to introduce an independent water supply in connection with a large building, but it is a highly specialised business which does not materially affect the structure, and an expert knowledge is not therefore necessary, and cannot be reasonably expected.

(To be continued.)

Royal Institute of British Architects.

The following are notes from the minutes of the Council Meeting held on June 26.

Robert Gordon's Technical College, Aberdeen.—The Post-Diploma (six years) course of the School of Architecture, Robert Gordon's Technical College, Aberdeen, has been recognised as exempting from the Final Examination under the usual conditions.

School of Architecture, Cardiff.—The three years' course of the School of Architecture, Cardiff, has been recognised as exempting from the Intermediate Examination for a further period of two years.

Registration of Electrical Contractors.—The Council have accepted the draft proposals for obtaining the sanction of the Board of Trade for the scheme of voluntary registration of electrical contractors in Great Britain, and have agreed to appoint two representatives to sit upon the Board of the Registration Authority.

Liverpool Corporation By-Laws.—On the recommendation of the Science Standing Committee, the Council have sent to the Liverpool Architectural Society a criticism of the draft By-laws on Ferro-Concrete and Steel Frame Buildings proposed by the Liverpool Corporation.

Tendering without Bills of Quantities.—At the request of the London Master Builders' and Allied Industries' Association, the Council have directed that a notice should be printed in the R.I.B.A. Journal recommending that in the case of ordinary works exceeding £1,000 in value contractors who are invited to tender should be supplied with bills of quantities.

Local Officials and Private Work.—At the request of the Devon and Exeter Architectural Society, the Council have written to the Ministry of Health on the subject of surveyors and sanitary inspectors in country districts doing private work in preparing and submitting plans to their council for approval.

Home Office Regulations for Factories and Workshops.—On the recommendation of the Science Standing Committee, the Council have decided to press for an inquiry to be held by the Home Office before the proposed regulations under the Factory and Workshop Act for buildings in course of construction are issued.

Housing Schemes.—On the recommendation of the Practice Standing Committee, the Council have ordered a statement to be printed in the Journal on the subject of the relations between Consulting Architects and Panel Architects.

The Architects' Benevolent Society.—A subscription of £100 has been paid to the Architects' Benevolent Society for the current year.

Mr. Harry E. Pollard, quantity surveyor, has removed his offices to 31, Craven Street, Strand, W.C.2.

In the course of a recent debate in the House of Commons on the Finance Bill, Mr. Ormsby-Gore moved a new clause providing that Entertainments Duty should not be charged on payments for admission to any exhibition for the promotion and encouragement of the arts of painting, etching, or sculpture held by a society whose sole objects were the promotion of these arts, and whose rules contained provisions that the net profits of such exhibition were devoted to the encouragement of the general interests of the society and would not be distributed by way of dividend to any of its members. Sir R. Horne said he agreed with the object of the clause, but he could not adopt it as it stood. He, however, undertook before the Report stage to introduce another clause which would effect the object the hon. member desired. On this undertaking the clause was withdrawn.



APPROACH TO THE ROTUNDA, SHOWING DECORATIONS BY JOHN SINGER SARGENT, IN THE BOSTON MUSEUM OF FINE ARTS.

The Sargent Decorations in the Boston Museum of Fine Arts.

By C. H. Blackall, F.A.I.A.

The decorations by John Singer Sargent have now been before the public in the Boston Museum of Fine Arts for a sufficient time to permit of a deliberate judgment of what they really are, how far they succeed, and wherein they are limited. They represent the mature work of an artist who made for himself a brilliant reputation in the beginnings of his work in this line, and whose progress as a decorator has been followed with deepest interest by all who hope for the future of art in America. Especially is his work of value to the architect, who, by the very nature of his association, appreciates that decoration is such an important factor of real architecture, and who appreciates also the few cases in which, either in the present time or the past,

architecture and decoration have been successfully combined. Indeed the opportunities for a decoration of this kind are so rare, that when an artist of Mr. Sargent's calibre undertakes it and is given the free hand which he had here, we look for something which would be criticised and judged by a very different standard from what would be considered in connection with work where the field was more restricted or the opportunities more circumscribed. These decorations have been described in bulletins and illustrated to a certain extent in several of the non-professional periodicals. Much has been published about them, most of it of a laudatory character, and little has been said in questioning the propriety or the success of these decorations, and, indeed,

it seems to be assumed in some circles that it is rank heresy to take any other attitude towards it than that of unquestioning acceptance and reverent awe-struck admiration just because it is John Sargent's work. But since the questioning attitude is a condition of growth, and because we would wish to see American architecture and decoration attain their best development, we are certainly justified in applying to this work some of the methods and analyses we would apply to any other great work, weighing it for itself, without being blinded in our judgment by either the glamour of the man who did it, the past work he has done so well, or the manner in which similar problems were met when the conditions were so different that a choice of solutions was afforded.

Regarding Mr. Sargent's ability as a painter, there need be no question. The heights to which he has risen as a draughtsman, as a colourist, a portrait painter and a thinker mark him as one of the great artists of the time, but we can properly consider his work here as a specific decoration of a specific piece of architecture, especially coming as it has after the Public Library in Boston, where his decorations were in a room otherwise of a slight architectural interest, and where the decorations were really the whole thing, the while in the Art Museum a greater painter has undertaken to decorate a portion of a highly developed, organic structure where the architecture of the apartment could not be ignored either by himself or by reference to the architectural forms immediately preceding and leading up to it. It is proper, then, to consider this simply as a decoration of a dome of the Boston Art Museum and as something which must be judged by its fitness for its place rather than of a sample of painting by a great artist.

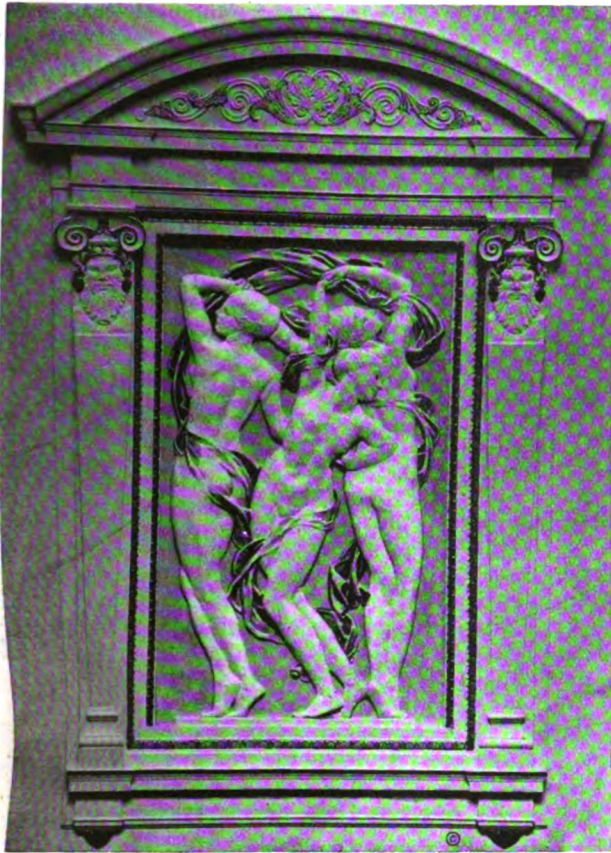
The decorations are applied to the surface of a dome over a rather small rotunda at the head of a wide, monumental stairway and at the intersection of the axes of the principal floor of the museum. It is a point eminently fitting for decoration. The dome is an ellipse in plan, and was originally heavily caissoned throughout without any structural or decorative treatment. The walls and ceiling were, and still are, all of plaster, the plaster work being painted to match

as closely as possible the rows of limestone columns which flank each side of the principal staircase. The floor is of Knoxville marble, so that the whole effect is a monotone of grey buff stone colour. The cornices and arches are of plaster and there is no attempt at lining or showing courses, but it is all frankly nothing but plaster work. When Mr. Sargent took up the problem, he very rightly decided that the caissoned ceiling would not be suitable, that no arrangement of panels could properly go with such a surface treatment, and accordingly, under his direction, the whole surface of the dome, and to a certain extent of the supporting disposition, was modified in accordance with his idea of the decorations. The surface now is intersected by round arches with plain archivolts on the axes of the dome, and the pendentives, if such term can be applied to the continuous corner surface, are marked only by perfectly plain ribs springing from the cornice to a perfectly plain ring around the base of the skylight, which lights from above. This disposition divides the space into eight surfaces. On the four principal surfaces over the arches are arranged large oval frames containing paintings. The bases of the pendentive surfaces are occupied by bas-relief groups set in architectural frames. Around the upper surfaces of the pendentives are smaller circular panels crowned by modelled figure work, and between the framed reliefs and the rounds of the pendentives are isolated cameo reliefs applied to the perfectly bare surface. There are no structural lines whatever, the ribs are throughout perfectly plain and with no attempt at decoration whatever. The principal surfaces between the ribs on the axes are treated as units in the sense that the decoration is extended over the whole surface, and these surfaces are given a frame and setting of very carefully chosen mouldings, but the appearance of the dome is essentially that of a constructive reinforced concrete motif.

As previously stated, the general colour of the whole apartment—indeed, of the whole building—is of buff Indiana limestone, and this colour has been adhered to in the dome, lightening up somewhat from the wall colour, and carried throughout all the ribs and surfaces, except in the major panels themselves. The dominant colour effect is a very



THE ROTUNDA.



RELIEF AT BASE OF PENDENTIVE.

pleasing blue, not a Wedgwood, but suggesting it. This blue is the background of all the painted panels and establishes the colour scheme in conjunction with several tones of gold, varying in effect from a pale lemon to a deep red gold. The paintings have, in addition, a narrow band of deep red against the blue and the frame. Aside from this the grey of the plaster and stone work goes practically everywhere.

The subjects are matters of interest but of no special importance from a decorative standpoint. They are not in the slightest degree connected in theme. They include representations of the Three Arts protected by the heathen deities, of the Nine Muses, and of the Chimera and the



ISOLATED BAS-RELIEF IN CENTRE OF PENDENTIVE.

Sphinx. Just what relation these would have to the decoration of an art museum is not evident, and perhaps not important. The principal point is the decorative quality of the whole and its coherence in place.

The disposition of the main oval panels is a very happy one, and the spotting of these on the domed surface, together with the strong notes of colour of the small pendentive medallions, is one of the fine features of the composition, in that they tie well together and are each proportioned so admirably to fill a very awkward space. The first impression of the dome is a very pleasing one. The effect of the individual groups taken by themselves, and especially when viewed in the detached photographs, is also very agreeable. The introduction of the sculpture gives a variety which is fully justified. It is in the treatment as a whole that a sense of incompleteness, rawness, is most evident. We are told that Mr. Guy Lowell, who is the architect of the Museum, had nothing to do with this work, and that Mr. Sargent called in Mr. Thomas A. Fox as his architectural adviser, but architecturally there is no evidence of any thought being given to it in relation to the rest of the building. It is a different note, while a pleasing one, but it is incomplete. One would wish that there were some recognition by colour treatment of the fact that the dome was to be entirely decorated. One may admire the cameo qualities of the painting, and then wonder why some of this same treatment was not carried down the pendentives to complete the structural sense of applied colour which is so absolutely lacking. Again, the frames for the beautiful figures at the bases of the pendentives are excellent themselves, but they have the effect of being crowded into the spaces, and, being exactly the same colour as the background, barring touching up with gold and the slight tone behind the figures, they seem like importations rather than incorporations. And when one considers the different parts in relation to the whole, one is struck by the utter absence of anything like a sense of scale. Apollo and the Muses and the corresponding large panels are one scale, not quite the same. The Three Arts is a different scale, and the Sphinx and the Chimera still another, while the small, round pendentive paintings are unlike any of the others in scale. The same is true of the sculpture. It is not in scale with the painting, the different groups are not in scale with themselves, there being in the sculpture at least three different scales, none of them related to the general decorated scheme. Whether this is a fault or a touch of genius may be a matter of opinion. Whether unity is even to be desired in a decoration of this kind is apparently seriously questioned by the artist; but, speaking only from the architectural standpoint, one cannot but regret that the architectural hand and restraining factors which go to make up every great decorative work could not have been more exercised here. There is too much detached easel work and not enough



A LARGER PANEL.

decoration as such. Mr. Sargent simply has not decorated the dome at all. He has arranged some more or less slightly correlated paintings on a domical surface with no sense of fitness and no constructive feeling, and it is not architecture, not even decoration of architecture, but painting pure and simple. Even his bas-reliefs are really pictorial, and as for the cameo reliefs in the centre of the pendentives, it is a question whether the whole composition would not have gained immensely if they were entirely omitted; but again, that is a matter of point of view. But granted that the painting is all its enthusiastic admirers claim for it; granted it has subjective interest and delicate, beautiful colour, all of which is another story, it is not decoration of architecture, but decorative panels, which is very different. It is not decoration of architecture, because, first, the architectural forms are absolutely ignored; second, because it in no sense covers the surface, but concentrates on arbitrary spots; and third, because the whole thing is subjective rather than objective—a matter of detail, with no sense of mass or unity. Every detail examined by itself, seems complete, not a part of a scheme, and, except for its colour, every part is more enjoyable and more appreciated in the photographic reproductions than in place. There simply is no scheme, no dominant thought, no intelligent grouping. Somehow, having in mind Mr. Sargent's personality, this work seems strangely unlike him, or, as if he had done it under very unusual and varying moods. The difference between the end of the Public Library, which is simply bursting with ideas and colours, and this dome, which is refined almost to the vanishing point, like a piece of rare Wedgwood, does not seem compatible with Sargent's artistic physique and his past work.

And yet, when we say the worst we can about it, criticise it most severely, object most strenuously to it as decoration, we are moved by its intrinsic beauty. It strikes a joyous note in an otherwise rather monotonous interior. It redeems a dull spot at the top of a long flight of stairs. One comes back to it with increasing joy, even though with increasing conviction of its being fine painting rather than fine decoration; and measured by every great work of the past, by the great masters of to-day, even measured by Sargent himself, in his magnificent beginning on the north end of the Public Library, which is truly at once decoration, painting, fantasy, fancy, imagination and pure art—measured by all the standards architects and decorators have aspired to for five hundred years, it is beautiful, yes; interesting, yes; reproduces well, yes; affords excellent opportunities for easel enjoyment; but it is not decoration.

[We reproduce the above article, together with the accompanying illustrations, from "The American Architect and Architectural Review," by permission of the Editor.]

The Case for Regional Planning.

In the course of the evidence given before the Royal Commission on London Government on behalf of the London Labour Party by Alderman Herbert Morrison, L.C.C., the question of regional or town planning was dealt with, and we think that the following extracts from this part of the evidence may be of interest to our readers:—

"London is an aggregation of a considerable number of towns which have gradually grown into each other. It is one, and it is also many. Its people are citizens in a dual sense, for whilst they have very considerable common interests in the whole of London, they also have special interests as residents of a particular local municipal area. The built-up portions of Greater London constitute a great urban sprawl of huge dimensions. A large proportion of the population live a considerable distance from the open country. Many of them rarely see the open country, and when they do, on such festive occasions as Bank Holidays, they are involved not only in expense, but in crowded and unpleasant travelling, with the result that the advantage secured from the day's outing is often a matter of some doubt.

"It is our view that the solid urban character of much of Greater London ought not to have happened, and that it is both unhealthy and unnatural for agricultural and rural life to be so far removed from a town population. The urban sprawl of Greater London happened because:—

"(a) When London ought to have been town-planned, modern town planning ideas found no place on the Statute Book; and

"(b) When Town Planning Acts were passed there was little left in London to town-plan, and no Regional Authority to make a comprehensive plan.

"It is from these fundamental errors or misfortunes that the grave problems have arisen which are now receiving the attention of the Royal Commission, and it appears to us that unless the situation is boldly faced the more or less chaotic sprawl of London will spread to the sea in the east and the south, to Reading in the west, and to Hitchin in the north. We cannot but regard such a prospect as other than exceedingly depressing.

"In the evidence submitted to the Royal Commission by the London County Council the old idea of an authority covering very little, if anything, beyond the built-up area is adhered to. This is a view with which the London Labour Party is in strong disagreement. It is exactly because the legislature has taken this view in the past that the more hopeful and socially profitable aspects of modern town planning are so difficult to operate. As a consequence towns grew up beyond what is a desirable size, and there exists a regrettable lack of contact between the townsman and rural life.

"From the point of view of efficient industrial and agricultural development no less than from that of securing healthy and pleasant housing conditions for the people, the London Labour Party favours the establishment in the Home Counties of a number of new industrial centres or garden cities, often referred to as satellite towns. The following definition of such towns has been given by the Garden Cities and Town Planning Association: 'A garden city is a town planned for industry and healthy living, of a size that makes possible a full measure of social life, but no larger, surrounded by a permanent belt of rural land, the whole of the land being in public ownership, or held in trust for the community.'

"I would draw the special attention of the Commission to the insistence on the preservation of a wide agricultural belt round such towns, and also that the satisfactory initiation of such towns under public auspices can only be undertaken by an authority covering a very wide area and possessing considerable financial credit. Such towns would either be evolved from existing small towns or groups of villages or deliberately made in a rural area, and it should be made impossible for them to grow into each other in the manner that has happened in the evolution of Greater London. London's surplus industries would gradually be attracted to the new towns, and when the unnatural congestion of London had been removed we could undertake, with much greater economy than is now possible, the improvement of London itself.

"It has been necessary for me to describe to the Commission the policy of the Party on town or regional planning in order that I may justify the view of the Party in this connection that the area of the new Regional Authority should be very much beyond what is commonly known as Greater London."

The Rome Scholarship in Engraving for 1922 has been awarded by the Faculty of Engraving of the British School at Rome to Mr. Robert Sargent Austin, a student of the Royal College of Art. Mr. Austin is twenty-six years of age and was born at Leicester. He received his early art training at the Leicester Municipal School of Art, and in 1913 won an exhibition at the Royal College of Art. His course of study, from 1913 to the present time, was interrupted by four years' war service with the heavy artillery. The Rome Scholarship in Engraving, like the Rome Scholarships in Architecture, Sculpture, and Decorative Painting, is open to British students of either sex under thirty years of age. It is of the value of £250 per annum, and is tenable for three years at the British School at Rome.

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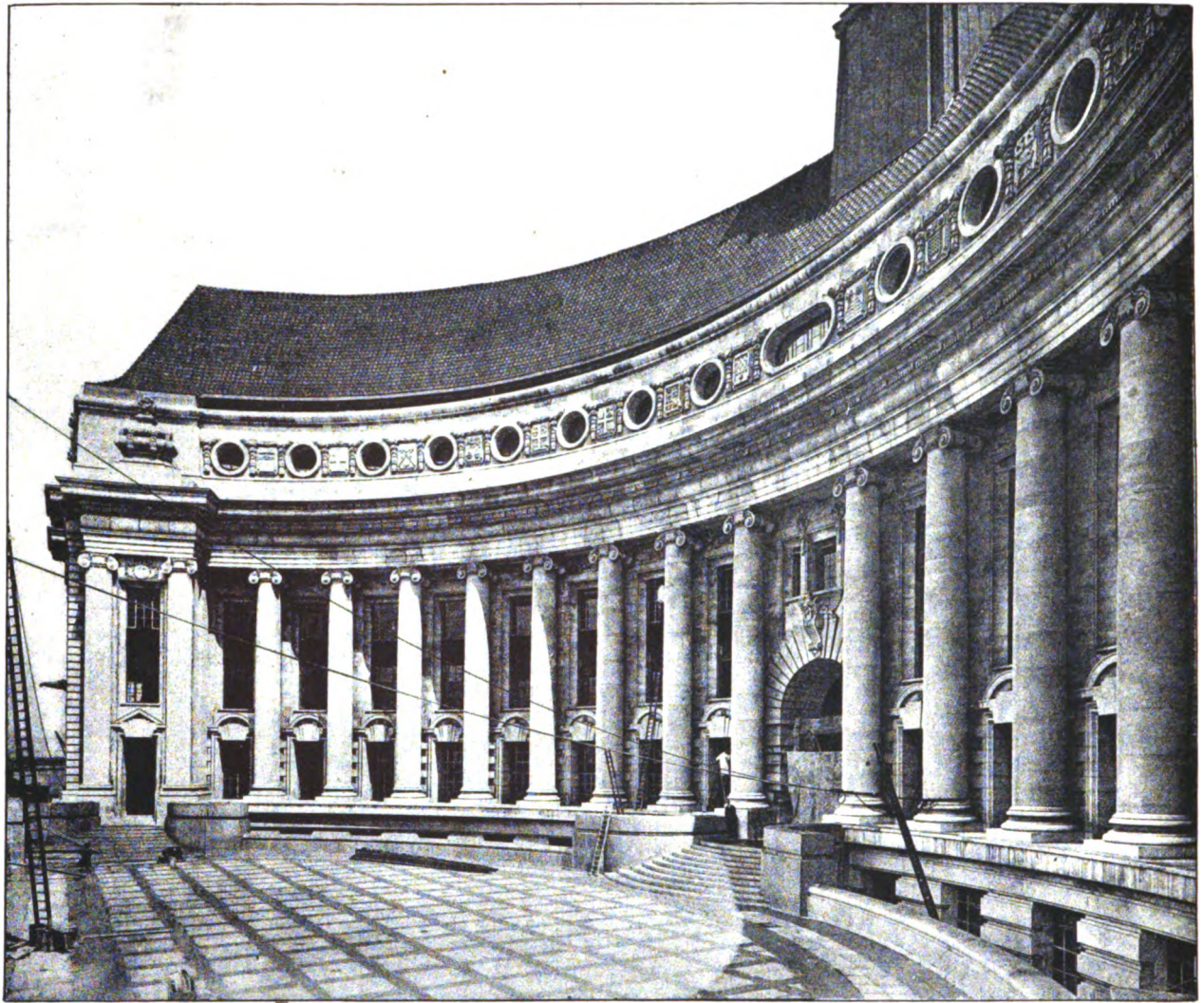
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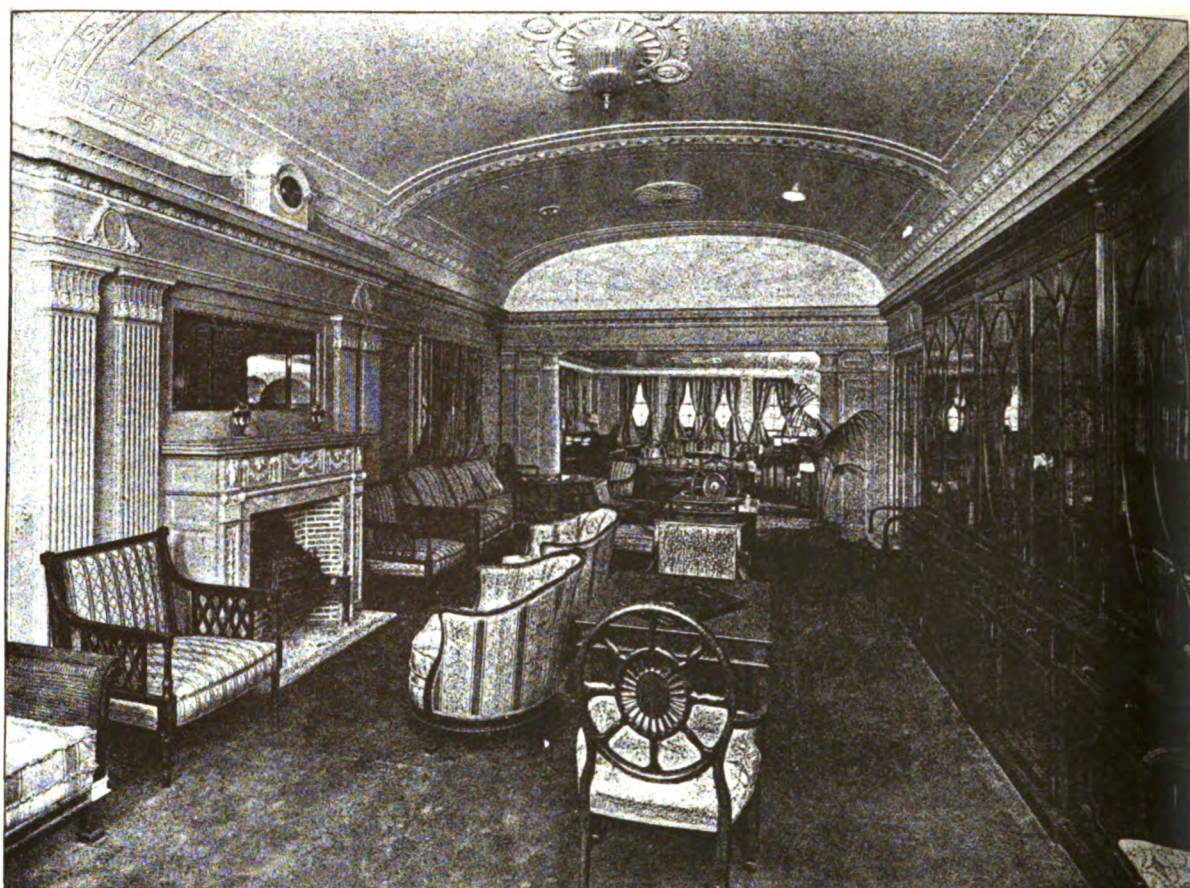
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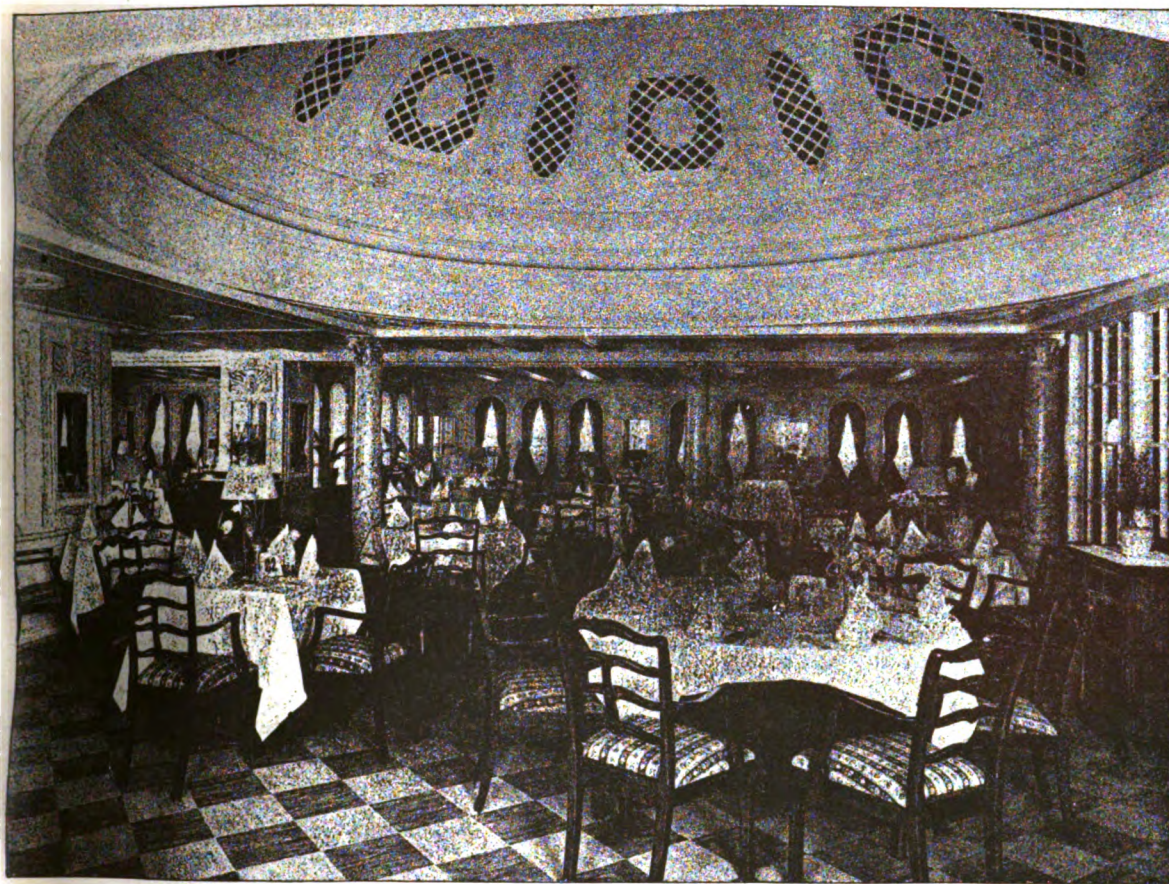
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FIRST CLASS WRITING ROOM AND LIBRARY.



FIRST CLASS SMOKING ROOM.



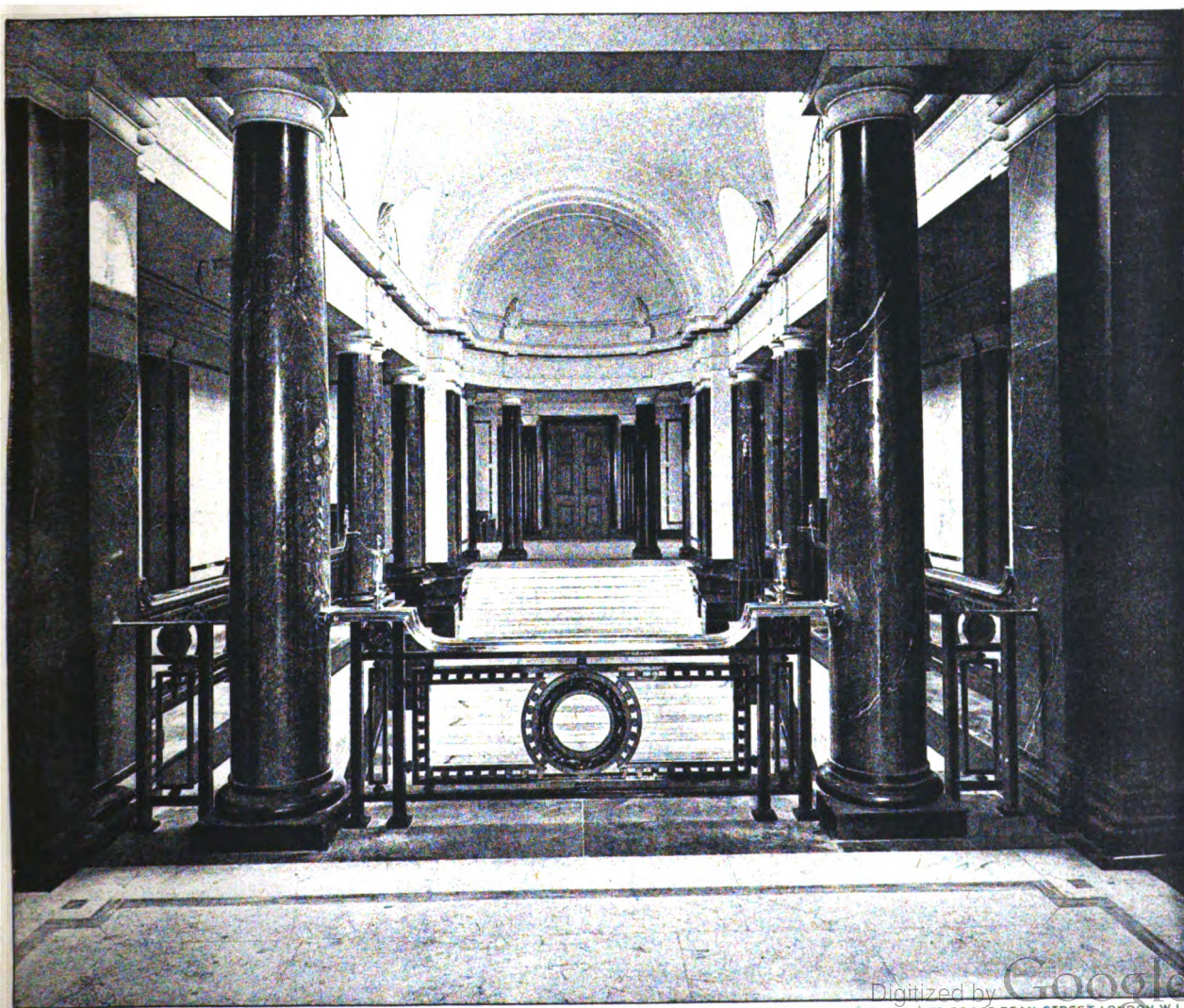
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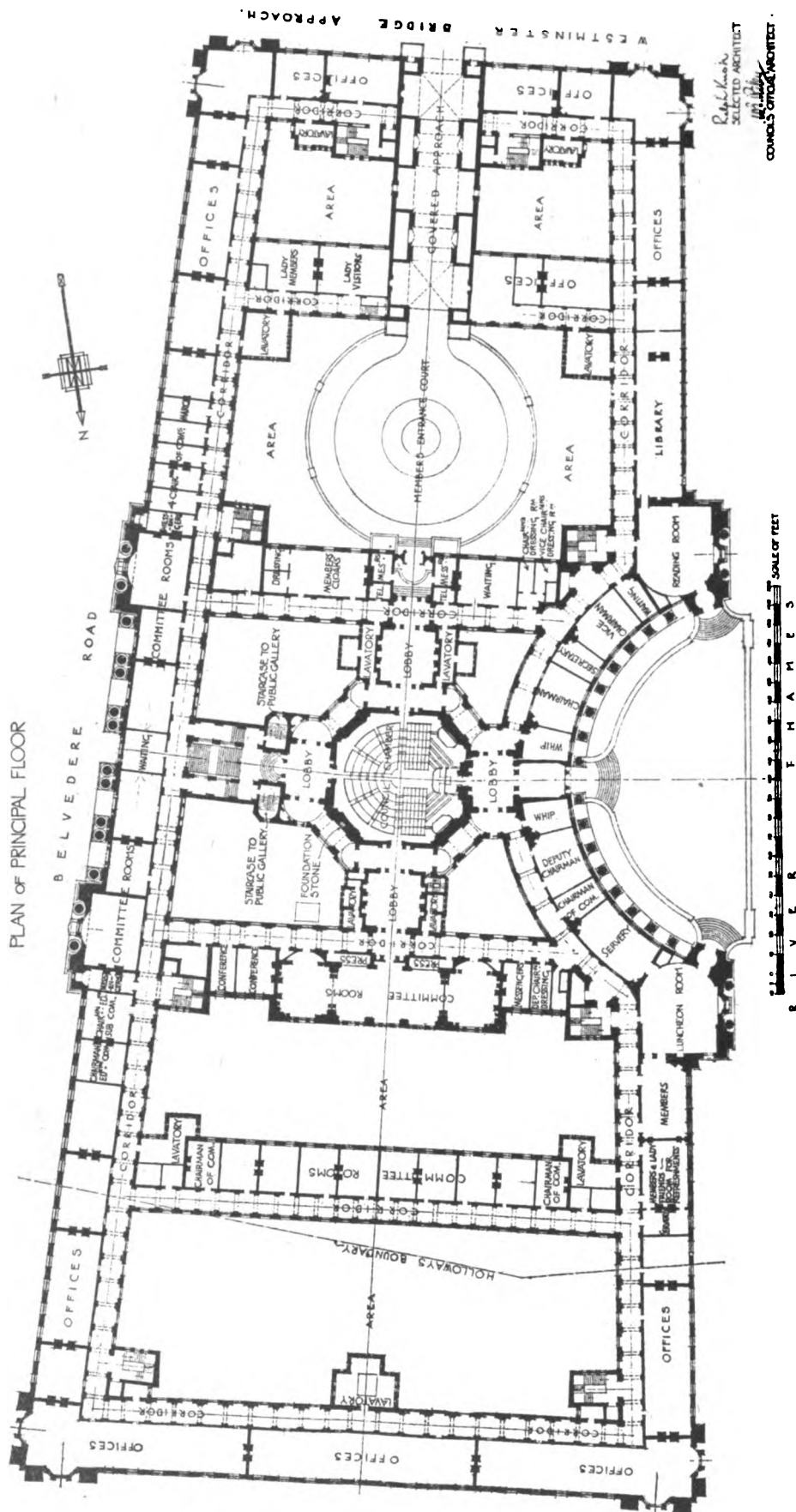


THE LARGE COMMITTEE ROOM.



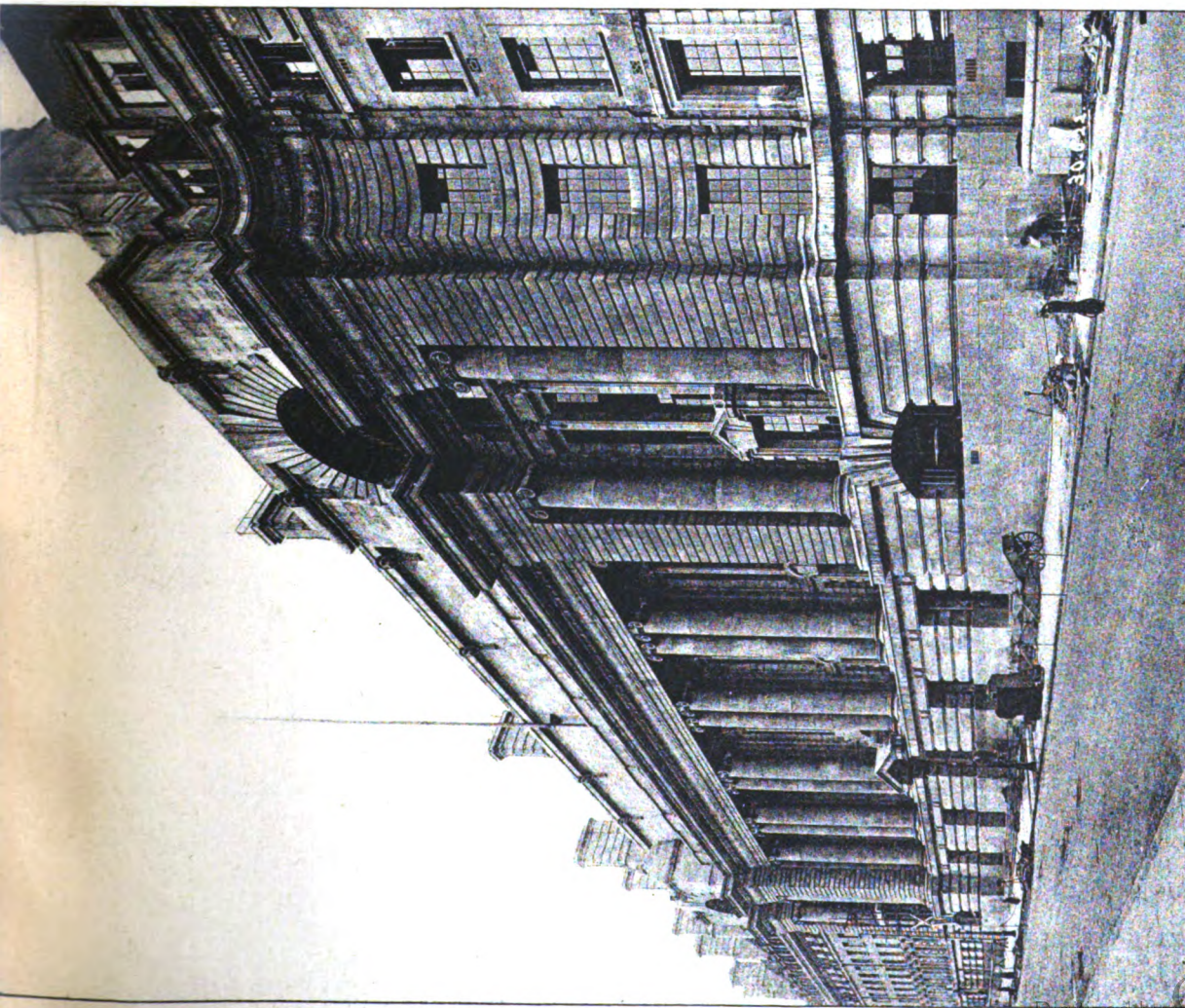
THE ARCHITECT, JULY 14th, 1922.

NEW COUNTY HALL
PLAN OF PRINCIPAL FLOOR

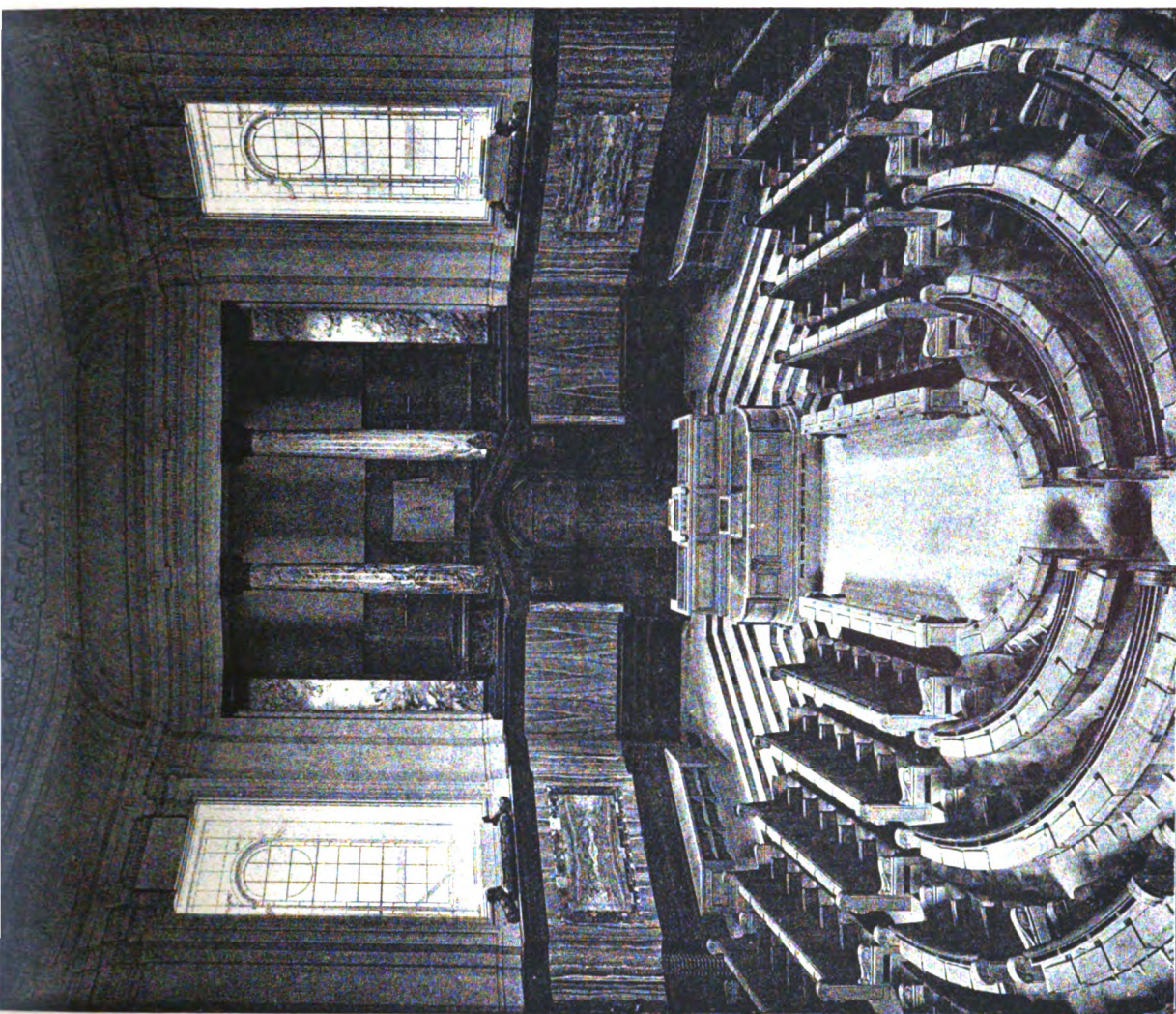


Ralph Knuth
SELECTED ARCHITECT

SEP 1 1965



THE PRINCIPAL ENTRANCE, BELVEDERE ROAD.



THE COUNCIL CHAMBER.

THE LONDON COUNTY HALL.
RALPH KNOTT, F.R.I.B.A. SELECTED ARCHITECT. W. E. RILEY, F.R.I.B.A., M. INST. C.E., R.B.A., COUNCIL'S OFFICIAL ARCHITECT.

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Correspondence.

Unification and Registration.

To the Editor of THE ARCHITECT.

SIR,—I have this morning received a circular letter from the Council of the R.I.B.A. informing me that at their meeting on July 3 they passed the following resolutions:—

1. That this Council considers the scheme of the Unification and Registration Committee is contrary to the best interests of the Public; of Architectural Education and Practice, and the Royal Institute of British Architects in particular, and is of opinion that the Committee should be dissolved.
2. That each Member of the Unification and Registration Committee be thanked for his services, and his appointment cancelled.

In my view Resolution No. 1 is merely a pious expression of opinion by the Council of one of the constituent bodies composing the Unification and Registration Committee, which is premature in view of the fact that the Committee has not made its report. I consider it unfortunate that the Council of the R.I.B.A. could have issued this resolution without consulting the Committee.

I further consider that Resolution No. 2 is *ultra vires*, and submit that the Council of the Institute has no power to cancel those appointments on the Committee made by other constituent bodies.

On the matter generally I submit with great respect that it is very unusual for a committee to be discharged before it has made its report, and that if, in the opinion of the Institute Council, the Unification and Registration Committee should be discharged at this stage of the proceedings, the proper course is for the Committee to be called together to consider the views of the Council of the Institute on the subject.

If the Committee is eventually discharged with its knowledge and consent either before or after it has made its report to the Councils of the constituent bodies, I submit that it would be more in accordance with the fitness of things and with precedent for the Council of the Institute to communicate the fact to the officials of the other constituent bodies rather than send an open unidentified circular letter to the individual members of the Committee purporting to cancel their appointment.—I am, sir, yours faithfully,

C. MCARTHUR BUTLER,
Secretary of the Society.

Society of Architects,
28 Bedford Square, W.C.
July 6.

Ad Quadratum: Critics having not proved their Case.

To the Editor of THE ARCHITECT.

SIR,—There is a Norwegian saying that small men use small means. Mr. Aars, in his article in your issue of February 24, seems to excel in using small means to refute the theory of Mr. Macody Lund. All his arguments are of the small type, both his pin-pricking insinuations and his tin soldiers of facts. I suppose that the two examples of Mr. Lund's alleged inaccurate diagrams of the Spire Cathedral and the St. Godehard Church printed in your journal of February 17 have been borrowed from Mr. Aars' arsenal. The inaccuracy, if any, appears to relate to a degree of a right angle. You yourself admit that the difference is not great, but in the name of exact mathematics you protest against the least inaccuracy and on that ground denounce Mr. Lund's theory. You seem to have forgotten that exact mathematics is one thing, and its practical application another. There are countless instances of applied mathematics in practical life where small differences between the exact science and its application occur, because "it is human to err." Your examples seem to prove, if anything, that the ancient builders did not use a theodolite or a sextant or some other precise instrument when setting out their work. The difference is so small, indeed almost negligible, that it is evident that the builders adopted the principle but did not apply it with rigid precision.

Your method of dealing with small differences is, on the whole, somewhat naive. In order to prove that a theory is wrong it is, in your opinion, quite sufficient to state that there are some slight differences between the theory and some few detailed facts. You do not bother about giving any percentage or ratio between the difference and the actual measure in question so as to enable people to judge for themselves whether such were of any real importance. You simply state that there are slight differences or irregularities; and without further ado you lay down as a sort of axiom that no difference at all can be tolerated if the theory be correct. I submit that no mathematician would agree with your

axiom, which is clearly absurd. If your way of reasoning were accepted as correct the whole business of insurance, for instance, which is based on a general mathematical theory, the theory of probabilities, would be impossible. There are thousands of insurances case which, apparently, do not fit in with this theory, and these differences and irregularities are, indeed, greater and more numerous than anything of the kind to be found in Mr. Lund's case. Will you, on that ground, contend that the theory of probabilities is wrong and quite useless for insurance purposes?

Your curious and quite unmathematical worship of slight differences does not prove that Mr. Lund's theory is wrong, but clearly demonstrates that your line of reasoning is faulty.

Also in other respects your method of dealing with his case is not in keeping with a high standard of scientific thinking or indeed of simple fairness. For instance, you carefully point out in the case of the Spire Cathedral that the ground plan does not fit in to a hair's breadth with Mr. Lund's theory, but you fail to mention that a few pages further on in the book a section of the same cathedral is analysed minutely by Mr. Lund in a diagram which shows that it corresponds exactly to his theory.

You reproach Mr. Lund for treating small differences as negligible and in that way "bolstering up" his theory, which you state "cannot be proved by the adoption of exact methods." What is your way of "bolstering up" your own theory that he is wrong? You simply omit to take into consideration that in the far greater number of instances the concrete facts are in full accordance with his theory, and that in the few other instances the divergence is quite small. Your standpoint seems to be that if there is ever so slight or negligible a difference between theory and practice, Mr. Lund is entirely wrong; and that if, in much greater number of cases, there is no difference at all he is still wrong.

What is no less remarkable than this is that Mr. Lund's adoption of the most exact methods in proving his case is by you and other of his opponents turned against him as a "proof" that he is wrong. In one moment you demand exact methods, in the next you practically say that Mr. Lund's methods are too exact; they are so elaborate in their accuracy that you declare it inherently improbable that the ancient architects ever used them. From this "inherent improbability" you jump to the conclusion that the principle itself was not used. In accordance with your way of reasoning we might as well contend that you do not apply the principle of ballistics when you throw a stone at a dog attacking you, because there is an "inherent improbability" that you first make an elaborate mathematical calculation of the parabolic curve to be described by the missile. Nevertheless you really apply the principle, but in your own way, while the mathematicians prove the existence of the principle in another way. So, too, with the principle of Mr. Lund. His case is not to show the practical methods adopted by the ancients in their use of the principle, but to establish the existence of the principle itself, whatever may have been the old methods of its application. It may be that the ancients used quite simple or approximate methods, but that in itself does not prove that the principle is wrong. Even in our own days approximate methods are extensively used in most branches of applied science. It is not because the exact formulæ are wrong or superfluous, but because the simpler or approximate methods, which, however, are based on the exact ones and can only be verified by these, are more convenient and speedy in practice. It is interesting to note that Mr. Lund himself has pointed out that the mediæval architects may very likely have used simpler methods than those described by him.

Nor is it any proof against Mr. Lund's theory that modern architects do not use any definite system or even any consistent approximate methods. If you are an experienced writer or speaker you form your sentences correctly without much thought of the niceties of grammar. Does that prove that there is no grammar? Or that grammatical methods of testing the correct form of expression are useless?

There is also the remarkable thing that while the opponents of Mr. Lund reproach him for not bothering about negligible differences they do not appreciate his courage in pointing out and dealing with the instances of greater differences—for instance, that relating to the Cologne Cathedral. In nearly all respects its construction corresponds exactly to his theory, but in one certain respect not, and Mr. Lund openly shows and discusses the difference by drawing a diagram in accordance with his theory and comparing it with the actual construction in question. "How brazen!" his opponents exclaim; "how easy to get out of the difficulty by saying that the difference is caused by the system having not been followed in that point!" Well, can you tell me what else he should have said? Who made the mistake at that particular point? Mr. Lund has proved that it was a 19th century architect restoring the cathedral!

Let me in conclusion state as a fact that many able architects in Norway, both young and old, originally did not believe in

Mr. Lund's theory, but after having studied it thoroughly they are now convinced that he is right, that he has in fact brought to light an old golden principle of architecture forgotten in modern rationalistic times when the mediæval art of sacred building was as much despised as religion itself. It is from that decadence of art and thought that some modern architects and other artists still draw their supply of contempt for science and system. The result of that decadence has been bolshevism and anarchy in art and many deplorable restorations of old cathedrals.

The mediæval architects succeeded during centuries in restoring beautifully the old cathedrals and in maintaining their lofty appearance and harmony even when they sometimes altered their style. The reason is simply that they acted in accordance with a geometric system known to all of them and infallible in securing harmonic proportion. Modern architects acting on no system and despising science and scientific methods can scarcely touch an old church without making it ugly and commonplace. Then, in desperation, some of them make it a confession of faith that restoration is from the devil.

That mediæval architects used certain geometrical systems in order to secure pleasing proportion is by mathematicians considered proved up to the hilt by Mr. Lund's book. Not only do his diagrams prove it in all essential respects, but there is also the historic fact revealed by him, that the builders of Milan Cathedral in 1392 and 1398 actually discussed the question whether the cathedral should be erected "ad triangulum" or "ad quadratum." The building committee even called upon experts in geometry to give advice. It cannot be disputed, therefore, that such geometrical systems for architectonic purposes were known to its builders. The "ad quadratum" system, on which the horizontal section of the church had been planned, would give greater height than "ad triangulum," but the builders seem to have begun to doubt whether, in the special circumstances, stability would be safe if the building was to be erected so high as the "ad quadratum" system required. They decided at last to let the building rise "ad triangulum." The contents of the protocols of deliberation are still existent and constitute positive historic proof of geometrical systems being known and used by the mediæval architects. In view of this and many other historical facts revealed in the book and verifying the conclusions to be drawn from his diagrams, Mr. Lund's theory cannot be disposed of by pedantically pointing out some small divergences or by contemptuously shrugging one's shoulders at an idea which does not fit in with decadent modern prejudices.—Yours, etc.,

M. M. MJELDE.

[As we have said, we should expect similar buildings erected for similar purposes to correspond with one another in their general proportions; also we should expect some very simple geometrical means to be used to simplify the process of setting out a building; but the discrepancies which exist between Mr. Lund's theories and actual buildings are in many cases not slight but marked ones. A strong man who has the use of his limbs does not use crutches, and we cannot imagine a great designer finding it necessary to grope his way to good proportion by the aid of the elaborations Mr. Lund describes.—ED.]

Unification and Registration.

The Council of the R.I.B.A., at their meeting on July 3, 1922, passed the following resolutions:—

1. That this Council considers the scheme of the Unification and Registration Committee is contrary to the best interests of the public, of Architectural Education and Practice, and the Royal Institute of British Architects in particular, and is of the opinion that the Committee should be dissolved.
2. That each member of the Unification and Registration Committee be thanked for his services, and his appointment cancelled.
3. That a Committee be appointed of members of the R.I.B.A., with power to add to their number and to co-opt, if necessary, non-members of the R.I.B.A., and to obtain expert advice, to draft a Registration Bill with a view to its being deposited in November, 1922.
4. That a small Committee be formed to consider the revision of the Charter and By-laws, and to report to the Council at the earliest possible date. The Committee to have power to add to their number and to take expert advice. The new Charter to provide for equal voting powers for all corporate members, etc., etc. A note to be inserted in the Journal asking members to send any suggestions to the Committee.

Architects' and Surveyors' Assistants' Professional Union.

The results of the elections of officials and the Executive Council of the Architects' and Surveyors' Assistants' Professional Union for the year 1922-23 were announced at a meeting of the new council on Monday, the third inst., in the rooms at 36 Victoria Street.

President.—A. J. Penty, Lic.R.I.B.A.

Vice-President.—J. M. D. Henderson, M.S.A., A.R.I.B.A. (Ayr).

Hon. General Treasurer.—R. G. Strachan, P.A.S.I.

Director of Employment.—T. Bilbow, M.S.A.

Executive Council.—Chas. MacLachlan, A.R.I.B.A. (chairman), H. D. Funnell, F.S.I. (vice-chairman), Messrs. T. Brad-dock, D. Cameron, C. R. Cathrow, R. F. Curling, L.R.I.B.A., W. S. Dalton, H. J. Davies, M.S.A., G. F. Fox, J. A. Gould, G. N. Hannam, P.A.S.I., W. H. Jackson, A. M. Laurie, A. Mather, M.S.A. Advisory Member of Council, P. W. Farmer.

In accordance with the instruction from the National Convention of Delegates, 1922, the following resolution was passed for communication to the Press, and for presentation to the Headmasters' Association, to serve as a warning to all interested in the recruitment and training of persons entering the professions:—

"The Executive Council of the A.S.A.P.U. desires to draw attention to the severely overcrowded state of the architectural and surveying professions at the present time, and warns students, parents, guardians and schoolmasters, also such students who contemplate leaving at the end of the present school year to take up architecture or surveying as a profession. Owing to the scarcity of money for capital work which must continue for a long time yet, the amount of building work in hand and under consideration is very small. Well-known practitioners have very little work in their offices; many small offices have none at all; Government and Municipal staffs are being drastically reduced, and hundreds of assistants, most of whom are fully qualified men, are without employment. Those who enter the professions can only come in to share the present distress, and the Executive feels that this should be very plainly put before them."

Forthcoming Events.

Saturday, July 15.—Architectural Association. Visit to Long Clendon Manor, Thame, Oxon.

—Northern Architectural Association Club. Sketching Meeting at Durham.

Tuesday, July 18.—Bristol and Gloucestershire Archæological Society. Summer Meeting opens at Tetbury.

Wednesday, July 19.—Royal Archæological Institute. Summer Meeting opens at Ripon (July 19-26).

Saturday, July 22.—Royal Institute of British Architects. Visit to Greenwich Hospital and the Royal Naval College, Greenwich. Visitors to meet at the tram stop, King William Street, Greenwich, at 3 p.m.

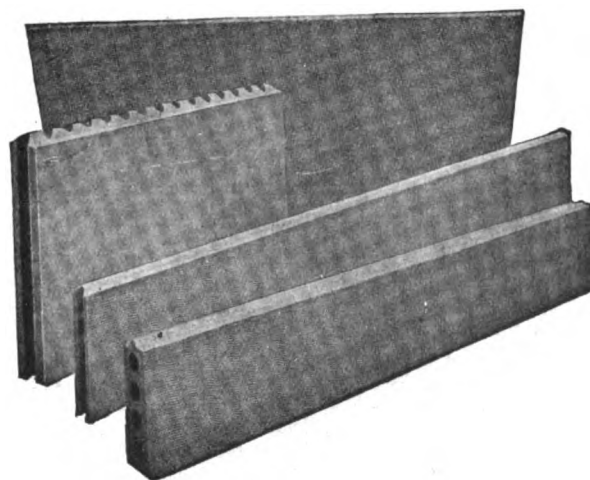
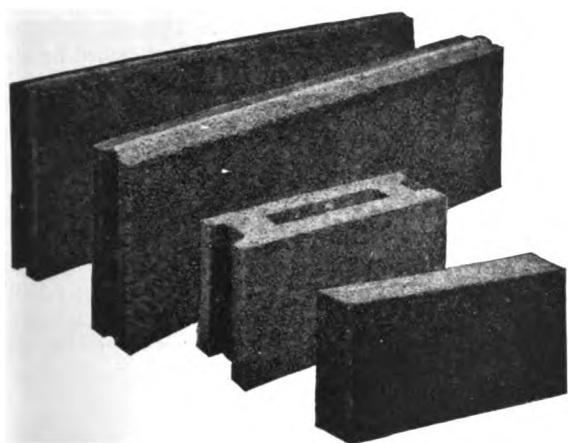
Competition News.

At the request of the Competitions Committee of the R.I.B.A., the drawings required in the Southend Proposed Secondary School Competition will be to a scale of 16 ft. to the inch.

The designs prepared by the candidates who competed in the Final Competition for the Rome Scholarship in Architecture, 1922, and the Henry Jarvis Travelling Studentship, 1922, will be on exhibition in the R.I.B.A. Galleries from Monday, July 17, to Saturday, July 29, inclusive, between the hours of 10 a.m. and 7 p.m. (Saturdays 2 p.m.).

With the permission of the Director of Greenwich Hospital, the Art Standing Committee of the R.I.B.A. have arranged a visit to the Hospital on Saturday, July 22, 1922. Members and their friends who intend to take part should arrange to be at the tram stop, King William Street, Greenwich, at 3 p.m., on the date mentioned, where they will be met by Mr. T. C. Agutter, F.R.I.B.A., on behalf of the Hospital authorities. An interesting programme has been arranged, as follows:—Enter the Royal Naval College at the South Gate; visit to the Queen's House at about 4.30 p.m., where the visitors will be received by Captain E. M. C. Cooper-Key, R.N., C.B., M.V.O., Superintendent of the Royal Hospital School; tea in Greenwich Park; visit to the Ranger's House. Those intending to take part should notify the Secretary R.I.B.A. as soon as possible.

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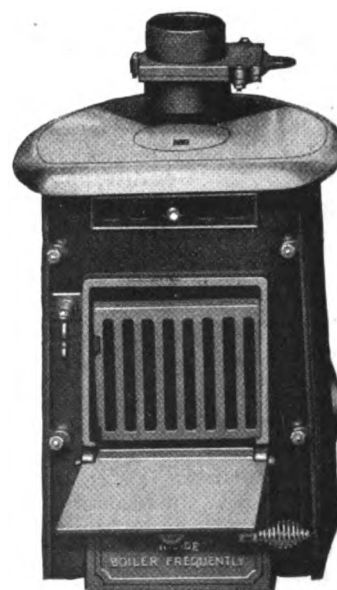
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Bedern Chapel, York.

The Very Rev. W. Foxley Norris, Dean of York, has issued the following statement as "A Record of a Futile Effort" to save the Bedern Chapel at York:—

I hear that the Chapel of the Bedern is finally condemned as no longer safe, and is to be forthwith demolished. With it will disappear the last relic of a most interesting mediæval establishment, and York will lose one more of its few remaining fourteenth-century buildings.

Therefore I want to make the situation unmistakably clear. No stone has been left unturned in our efforts to preserve this building. I have personally been working at it, on and off, since the summer of 1919. The building does not belong to the Dean and Chapter, but to the Vicars-Choral (a separate corporation). The Dean and Chapter have no funds, therefore, that could be used for its restoration. Similarly, the Ecclesiastical Commissioners are in no way responsible, and cannot make a "grant."

In October, 1919, a fully stated appeal was sent to all the leading papers, including the architectural journals, as well as "The Times," "Spectator," etc., and the Yorkshire papers. The total result of this appeal (for £900) was £9 13s., and a great many letters urging me on no account to let the building perish. Then a local connection was formed, and did what it could. Then the Yorkshire Archaeological Society took it up in 1921, and a deputation went into the question. Meanwhile the Society for the Protection of Ancient Buildings had written sympathetically, and the Ecclesiastical Commissioners promised a donation (not a grant out of the common fund) of £50. Other corporations and charitable trusts were appealed to, and well-to-do people were personally approached. But all our efforts, extending over three years, have failed to raise £100, and nothing less than £1,000 would be of any use.

It is quite true that the Vicars-Choral in times gone by ought to have kept it up, and the present Vicars tried to induce the Ecclesiastical Commissioners to allow them to devote part of their capital to its restoration, but without avail.

It is quite true, also, that there is no special architectural beauty about the building, nor any great need of it for practical purposes. It is simply on the ground of its historic interest that it ought not to be allowed to perish.

I must apologise for the length of this letter, but it is necessary to protect the good name of the present generation. We do not want shocked archaeologists in a year or two to say, "What were the authorities at York thinking of to let the Bedern go? Of course we would all have helped." The fact is that the situation has been before the public and the archaeologists for three years, and we have been quite unable to arouse the slightest glimmer of enthusiasm, much less any financial support; so that neither the Dean nor the present generation of Vicars-Choral, nor the local authorities, who have been most patient and considerate, must be blamed when it is discovered that no trace of the Bedern remains.

Conditions of Contract.

The negotiations between the Royal Institute of British Architects, the Surveyors' Institution, the Society of Architects, the National Federation of Building Trades' Employers, and the Institute of Builders, which have been proceeding for some time with a view to the preparation of a Standard Form of Contract for building operations, have reached their final stage.

A Conference of representatives from the above bodies have appointed a Drafting Committee which is already at work on the Contract Document. All matters on which the parties fail to reach an agreement will be referred to arbitration by a Tribunal of Appeal, consisting of one representative each of the Builders and the Architects, under the Chairmanship of Sir William Mackenzie, K.C., President of the Industrial Court. Sir William is well known as an arbitrator in industrial disputes, and the acquisition of his services is of the greatest importance to the interests concerned. His appointment was made with the consent of the Ministry of Labour.

The expenses of the preparation of the Standard Form of Contract will be borne jointly by the parties interested, and the Council of the R.I.B.A. have voted a sum of £200 for this purpose.

It is hoped that the five spending departments of H.M. Government will accept the invitation extended to them to appoint representatives to assist the Drafting Committee.

The Problems in Design submitted by candidates for the Final Examination and the Special War Examination of the Board of Education will be on exhibition in the Galleries of the R.I.B.A. from Friday, July 14, to Friday, July 21, between the hours of 10 a.m. and 5 p.m.

A New Hot Water Boiler.

The Sentry Duplex No. 6 is an entirely original and fully protected design of hot-water boiler specially produced to meet a very definite demand.

It is becoming more and more usual for a small hot-water heating system to be installed in moderate-sized houses in which there is neither the room nor the labour available to operate two separate boilers for heating and domestic water supply respectively. The alternative has been either to make the domestic supply subsidiary to the heating system and heated by a coil taken from the latter, or to work the radiators off the domestic supply boiler. By employing a Sentry Duplex No. 6, however, the user obtains all the advantages of a single fire without the drawbacks hitherto inherent in any scheme using a single boiler, thus:—

(1) A constant temperature is maintained in the heating system, irrespective of demands made on the domestic supply; (2) the efficient domestic hot-water supply is direct from the boiler; (3) the heating system is entirely free from sediment; (4) for summer work, the size of the boiler and the fire are reduced; (5) the heating system is kept charged through the hot-water supply system, and a separate cistern and ball-valve is rendered entirely unnecessary.



The Sentry Duplex No. 6 is so constructed as to operate as two entirely separate boilers which can be combined at will to operate as a single boiler. Externally, it embodies all the features of the well-known "Sentry" boilers. The fire is visible through large and well protected mica windows, the boiler can be operated with an open fire if desired, the furnace doors act as trivets when open, and a large hot plate is available for cooking.

The Sentry Duplex No. 6 has a heating capacity sufficient for 125 square feet (say, four or five medium sized radiators) and at the same time will supply 70 gallons of water at bath temperature per hour. Broken gas coke will be found generally to be the cheapest and most easily operated fuel. Anthracite, or a mixture of coke and coal can also be used.

Owing to the arrangement of the smoke outlet and pipe connections, the boiler can be placed close up both to a wall and to objects on both sides.

The waterway extends below the firebars to allow any sediment to fall to the coolest part of the boiler, whence it can be easily removed through the cleaning covers. To facilitate clean stoking a special fuel funnel is provided with each boiler. The loose night hopper is useful if the boiler has to be left for over twelve hours.

Full erection instructions and directions for use are issued with all Sentry boilers.

Mr. John Hutchings, A.R.I.B.A., has handed in his resignation as architect to the Staffordshire Education Committee, owing to the state of his health. During his nineteen years' service Mr. Hutchings had designed and erected 55 elementary schools, and, singly or jointly, four secondary and four technical schools, as well as other buildings. In concert with Dr. Reid, he has been responsible for working out the designs and carrying into practical effect in nearly all these buildings the Staffordshire type of school, the principle of which has been generally accepted throughout the country.



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The Henry Jarvis Travelling Studentship.

The Faculty of Architecture of the British School at Rome have decided that, subject to the approval of the Faculty, the Henry Jarvis Student will be allowed to spend six months of his second year away from the School in any part of the Mediterranean Basin, it being understood that scholars are allowed under present conditions to travel, during the first and second year, for short periods in Italy and Greece.

University of London, University College.

SCHOOL OF ARCHITECTURE.

The following are the prizewinners for the Session 1921-22:—
Donaldson Silver Medal.—F. Jenkins.

Hubert Batsford Prize.—Best 1st Year Student, Leonora Payne.

Andrew Taylor Prizes.—2nd Year Construction, C. G. W. Eve; 3rd Year Studio Work, F. E. Towndrow.

Ronald Jones Prizes.—Mediæval History, J. R. Alabaster; Renaissance, M. A. Sisson.

Lever Prizes in Architecture.—1st Prize, M. C. Glover; 2nd Prize, F. E. Towndrow.

Lever Prizes in Town-Planning.—1st Prize, K. A. A. Ansari; 2nd Prize, R. N. Vans.

Architects' Journal Essay Prize.—J. B. Wright.

Students Gaining the Certificate in Architecture. (This Certificate carries exemption from the R.I.B.A. Intermediate.)—J. R. Alabaster, H. M. A. Armitage, E. Burckhardt, J. B. Cooper, B. E. Dixon, C. G. W. Eve, J. T. W. Greenidge, Amy Hargroves, J. D. Harriess, J. Hawkins, J. R. Hill, R. Hobday, A. F. Hope, P. C. R. Jayasuriya, R. L. Luke, G. M. Mace, G. L. Ll. Morgan, G. T. Nicholson, Barbara Pouschkin, H. F. Rea, C. H. Short, M. A. Sisson, L. R. Stedman, L. G. Stokes, Edith Studdy, B. L. Sutcliffe, C. G. Sykes, F. E. Towndrow, E. Unwin, Louise Wilson, H. Wright.

Students Gaining Certificates in the Town-Planning Department.—K. A. A. Ansari, R. A. Hudson, P. C. R. Jayasuriya, O. T. F. Seneratne.

Housing News.

Sir Alfred Mond (Minister of Health) has made the following statement:—"On June 1 the number of houses completed under State-aided schemes was 149,207, including 115,899 provided by local authorities and public utility societies, and 33,308 by private builders. On the same date 40,970 houses were under construction by local authorities and public utility societies, while preliminary certificates had been issued to private builders in respect of 8,846 houses. The latter, in order to qualify for the subsidy, had to be completed by June 23. In addition, there was a balance of 19,131 houses to be built by local authorities which had not been started. The total capital cost of the assisted housing schemes of local authorities and public utility societies was estimated at 190 million pounds, of which approximate 160 millions had been expended by June 1. Up to that date £7,800,000 had been paid in subsidy to private builders.

Newbiggin Council have received a letter from the Ministry of Health, conditionally approving the acceptance of Messrs. Dyson Lindsley and Co.'s tender for 20 more houses on the present building estate.

Consett Urban District Council has recently had before it plans prepared by the Council's officials for 100 new houses. These are estimated to cost £300 each, and will consist of a large room downstairs, three bedrooms, and a bathroom. A member said that what was urgently required was some cheaper rented houses. What they were up against to-day was the getting in of their rents and rates for Council houses. The Clerk said he had pointed out to the Ministry of Health the urgent need for smaller houses. The Council approved the plans, and the Clerk was instructed to forward them to the Ministry.

Southwick Urban District Council has decided to apply to the Government for permission to proceed with the erection of another 100 houses on the Marley Potts estate.

General.

Mr. Joseph Watson, of South Hampstead, N.W., builder and decorator, of Messrs. Watson Brothers, of Hallam Street, W., died leaving property to the value of £172,914.

Major W. H. Morgan, D.S.O., has been appointed County Surveyor of Essex, at a salary of £1,000 a year, with £395 allowances for travelling and upkeep of a motor-car.

Hawick Town Council have resolved to proceed with a sewage scheme at a cost of £30,000, providing five sedimentation tanks and sludge-pressing and screening plant at the works.

Mr. A. Eaton Painter, of Wolverhampton, is the architect for a new administration block to be erected at Priestwood Sanatorium, near Stourbridge, by the Staffordshire, Wolverhampton, and Dudley Joint Committee for Tuberculosis.

Swansea Health Committee have decided to apply to the Ministry of Health for sanction to borrow £124,250 for the proposed isolation hospital to be erected on the grounds of Hill House, and for a further £2,500 to extend the hospital at Cwmllyd.

The Workop War Memorial Committee have approved of the design for a war memorial by Messrs. Richardson and Lloyd, architects, Workop. It takes the form of a cenotaph, to be constructed of "Whitbed" Portland stone, on a grey Aberdeen granite base. The height above pavement level is 21 ft. The committee have accepted the tender of Messrs. Lidster and Brammer, Workop, to carry out the work for £1,360.

A new concrete road is now being constructed by Messrs. Harland & Wolff, Ltd., engineers and shipbuilders, at their works at Queen's Island, Belfast, and is being reinforced by Walker-Weston Pyramidal Double-Layer Reinforcement. The same reinforcement has been used by Messrs. Harland & Wolff for a number of roads laid in their shipyards during 1920. These have stood the test of wear by heavy traffic with absolute success. The roads are used for transport of heavy fabricated parts of ships from shops to building slips by heavy tractors. New concrete roads are to be constructed at the London works of Messrs. Harland & Wolff on the Walker-Weston principle in course of this year.

At the last meeting of the Somerset County Council the committee appointed to consider the question of the appointment of a full-time architect recommended, in the interests of economical administration, that they be authorised to appoint a full-time architect at £500 a year and travelling expenses, and provide him with the necessary offices and assistance at a cost to be approved by the Chairman of the Finance Committee. There was some discussion on the proposal, one member remarking on the danger of its developing into an expensive department, while another member said it would mean a saving of expense compared with employing outside architects on fees. The chairman commended it as a measure of economy. The recommendation was adopted by 46 votes to 17.

A comprehensive scheme for the development of Peasholm Gap on the North Shore, at Scarborough, has been provisionally approved by the local Council. The main feature of the scheme is the provision of an open-air bathing pool. This is to be constructed on the North side of the Gap. Accommodation will be provided here for 4,000 spectators. The pool will be slightly smaller than that in the South bay, being 110 yards long and 50 yards wide at its greatest length and width. There are to be 420 bathing boxes. There will also be a café and forecourt. A circular open-air theatre is to be built at the corner of the Royal Albert Drive. From this a shelter is to extend along the whole foot of the Alexandra Gardens in front of a temporary miniature railway. There will be a frontage of shops.

The Bristol Guardians recently called in Mr. J. A. Gotch, F.R.I.B.A., to report upon their historic Court room, which was threatened with collapse, and they have adopted his recommendations. Mr. Gotch's report stated that the Court room is an admirable example of Jacobean work, essentially worth preserving; the older roof which exists above the ceiling, and which is so good an example of Gothic work, is most important to preserve. Owing to difficulty of access, it is not possible to ascertain the whole extent of the mischief. He concurred in Mr. W. S. Skinner's suggestion of carrying the whole weight of the roof on new steel principals, which can be inserted without in any way injuring the old woodwork. If this is done, all anxiety as to the future of the roof will be set at rest, and the cost will not be great—much less, for instance, than that of a new roof.

Trade Notes.

Mr. Ernest T. Garner, representative of the Jefferson Glass Co., Ltd., of Toronto, is back in England again, having with him at Sentinel House, Southampton Row, W.C.1., a full range of illuminating glassware, including their well-known line "Moonstone" ware. It is worthy of note that this Canadian company are keeping to the forefront in the industry, and are the only manufacturers of this kind of glassware in the British Empire. Mr. Garner reports that his trip so far has been very favourable, and he is impressed by the loyal support and cordiality extended to him by his business friends on this side of the Atlantic, as well as by the many subtle indications of a revival of trade prosperity. At Sentinel House some very attractive goods are on view. In addition to articles like reflectors, bowls, etc., there are some specially fine lanterns and hand-painted table lamps of charming design, together with ivory-etched bowls, shades and stalactites. It is pleasant to see that a Canadian manufacturer is sufficiently progressive to be able to compete on equal terms with anything of the same kind produced in the United States or any foreign country.

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Ostentation in Building.

THE term "ostentation," which is definable as a love of show or ambitious display, may be applied to buildings as well as to persons, because design must be the result of mental processes and must bear the impress of personal character or want of character. It is often confused with elaboration or extreme richness, but in reality has little to connect it with either, for it may be quite as strongly marked in work of great simplicity or even baldness.

Henry VII.'s Chapel, at Westminster, and many of the châteaux of the Loire are examples of extreme richness and elaborate design, but no one would term them ostentatious in their character; while, on the other hand, the design of buildings on which not a tithe of such elaboration has been expended may convey a dominating impression of ostentation.

The distinction, which those who think will admit undoubtedly exists, is an important one to bear in mind, because there is an almost universal tendency in art criticism to estimate the merit of work by judging it by standards of simplicity and elaboration, condemning work marked by the latter quality.

In the popular writers' estimate of the merits of the mediæval Gothic periods it has become customary to give that of the thirteenth and early fourteenth century the preference, chiefly because it is described as being simple, pure, and not over-elaborated. The same canon of judgment is applied to the work of other styles and periods, while newspaper critics of the present day attempt to judge of the merit of contemporary work on the same basis. If an architect omit a crowning cornice to a building, many will be found to praise his judgment, and the more a building resembles a roughly modelled form with detail omitted, the more likely it will be to attract both attention and praise. Such buildings are more often than not the result of "ostentation" on the part of a designer and not of logical thought, and resemble the attempt of a crank to draw attention to himself by walking down a street without a collar or with his feet encased in sandals instead of boots. But whereas the ostentatious display of ornament marking the design of the commonplace cinema or public house is at least understandable as being a direct and obvious attempt to play down to the gallery of uneducated public opinion, the ostentation of the crank designer is peculiarly offensive, since it suggests a want of sanity and the ignoring of reasonable standards.

We are constantly told—especially since the economic results of the war have rendered building costly—that the all-important factor in design is proportion, and that detail is immaterial, but the critics seldom remember that in an elaborate architectural design proportion is as essential as in a simple one, and must be displayed in the design of every decorative device employed. The designer has, in fact, only chosen a more difficult theme, while his work, to be successful, has to show the same regard for proportion which is displayed in a simpler one. The very high building costs of 1919 and 1920 led to a perfect epidemic of

crude design in which detail hitherto thought appropriate and proper was eliminated, and there is a danger that what came about through an economic necessity may be taken as a precedent for a general impoverishment of design. Although the pre-war public building was sometimes marked by over-elaboration, it cannot be said that the average pre-war building was. If we go carefully through some of the plainer of our old Georgian buildings we shall notice that in their detail they show an abundance of carefully designed joinery and plaster work which is in sharp contrast to the poverty of much of our modern design. We shall recognise beautiful work in the fanlights of doors in some cottage or small house that we should hesitate before using in far more costly work of to-day. There was in the past no affected cult of simplicity which to-day is either the result of actual want of money or that most detestable of all forms of ostentation, the desire to substitute vacancy for thought and to make an ostentatious display of bareness. We may see in some of the work of the Louis XV. epoch a delight in elaboration we do not fully understand, or a richness which appeals to eyes accustomed to plainer outlines as excessive, but at the same time we shall clearly feel, if we think, that it is the result of a love for design rather than the wish to attract attention to peculiarity which is so strongly evinced in much of our modern work, and is an indecency in any age of taste, and one which should be eliminated, and it is in the power of architects to do so. Public taste is not inborn, but the result of comparisons which the average man makes from what he sees every day. If architects, like bad cooks, place unwholesome or badly prepared dishes before their clients, they may create tastes which hamper their future freedom of choice, but in that case the evil has been of their own fashioning. If we could analyse the origin of what to-day we call bad design, which the public are said to insist upon, we should probably be able to trace it back to the desire of some architect to "strike a new note" in design in his ostentatious desire to attract attention to his work.

The ostentation of to-day in design is shown by the disposition to use rare and costly materials in unexpected places to fill up the gaps left by poverty of architectural conception on the part of the designer. Too many buildings leave the impression of a nightmare of marble, brass and ironwork and lack the unity of consistent design. The oak, brick, Portland stone and plaster which were sufficient for Wren are not enough for the modern designer, who must startle us by the use of materials brought from the farthest ends of the earth and often used like a jigsaw puzzle. But as it is certain that in the future people will become more rather than less specialised in their avocations and less desirous to trespass over the confines of a calling, architects should have a freer hand in design, and will even more than in the past be in the position of creating precedents of design which will bind or give them more latitude as the case may be.

Our Illustrations.

The Reconstruction of the Hotel de Ville at Peronne.

We are glad to illustrate this very interesting design, which was selected for execution from among those submitted in competition. The original building comprised buildings of several periods of the Renaissance, and in the instructions to competitors they were asked to adhere generally to the lines of the former structure, modifying them to meet the requirements of accommodation laid down. In the design illustrated this has been done with marked effect and great skill and with a feeling for picturesqueness of effect which is too often absent from modern French design. The dull and academic nature of the design placed second in the same competition emphasises this. Architects are sometimes criticised for too slavishly following old precedents, but in this case the course is most fully justified, and it would have been a pity had other counsels prevailed.

Messrs. Liberty and Co.'s New Premises in Argyll Place, London.

We illustrate to-day from a water colour drawing exhibited at the Royal Academy a novel departure in modern street architecture which is of considerable interest.

The name of Liberty is a household word associated with art fabrics and furniture. The company decided to build their new premises in the Tudor style because the Tudor period is essentially English and a Tudor shop brings to the mind a picture of those bygone days when the ancient guilds of the craftsmen and the merchant adventurers displayed, in the beautiful gabled buildings of old London, the productions of their handicrafts and the treasures for which they had sailed so far and endured so much.

There is a glamour about the lavish and riotous days of Queen Elizabeth and Henry VIII, and a house of that period is a fitting setting for the richly-coloured and hand-printed silks from Merton Abbey and the East, for the brocades from Italy, France, Japan and Shantung, for the silken and woollen carpets from Ispahan, Bokhara and Shiraz, for the jade and porcelain and embroidered shawls from China, and all those other beautiful examples of the craftsmen's work with which Liberty and Co. concern themselves and offer to the public to-day. These goods will be shown in rooms of a height and kind that people are in the habit of living in, and will be seen in their proper proportion and judged on their true merits.

Rosetti, Burne-Jones, Watts, Leighton, Albert Moore, Whistler and Alma Tadema were early customers and friends who visited the little shop in Regent Street, opened by the founder of the business, the late Sir Arthur Liberty, in the latter part of the nineteenth century, which business has grown to so large a volume as to demand more and more extensive premises.

It may well be that the large number of visitors who come to London from all over the globe—from places where there is abundance of Renaissance or other architecture—will be interested to see a London street of Tudor architecture carrying on the tradition of "half-timbered" work. The last large building still extant in London erected in this style is Staple Inn, in Holborn, which was built over 320 years ago.

The site of the new building is an island, surrounded by roads, and the principal front occupies the whole of the south side of Argyll Place, the roadway of which is to be doubled in width.

The architects have given sympathetic effect to their clients' ideas, and by artistic grouping and by variety of parts have epitomised the style in a rhythmic and pleasing manner. They have also shown how the whole group can be built up-to-date in the matter of fire-resisting construction, fire protection and escape, ventilation, sanitation, lighting, heating, and comfort for the working staff.

The external timber framing is to be of teak, that of the interior of oak, in large balks, and what will be a further matter of interest, all this timber comes from two old "three-decker" men-of-war, now being taken to pieces, one of which is about the same length and height as the Argyll Place elevation. Some of the timbers in the ships are 17 inches square, but the bulk to be used will be 15 and 12 inches square balks with adzed faces. The oak floors throughout are from the ships' decks. The external timber, all morticed, tenoned and pegged, is filled in and backed with brickwork, and in many places there are double or cavity walls. The roofs next the streets are covered with tiles and the pent roof at the main entrance with stone.

It should be added in these days, when so much has been said about the necessity for higher buildings, that instead of the 80 feet height of external walls permitted by the London Building Act the height of this building is 46 feet.

As a matter of town planning, the main entrance is opposite

Argyll Street, and the triple gables carried on stone towers will be visible from Oxford Street.

As will be seen by the plan, this entrance at the outer edge of the pent roof is 30 feet wide. It opens into a large vestibule enclosed by a glazed oak screen, and from this access is given to eight 5-storeyed galleries (divided by party walls), those on the north and south lighted from roads, those in the centre lighted from the sky. In addition, there is an extensive basement. The north galleries on the fourth floor, about 260 feet long, will have oak open timbered roofs.

There are seven staircases, five of which extend from basement to the central flat roofs and give egress direct to the street. There are four lifts.

The area of floor space is about three acres.

The north and east central galleries in the basement; the whole of the ground, first and second floors; the north and part of one central gallery on the fourth floor, will be show rooms; and there are about a dozen trying-on rooms.

The remainder of the building consists of offices, work rooms, four dining halls, two kitchens, rest room, oak room, groups of lavatories, etc.

The lighting will be by electricity.

The ventilation generally will be by fresh air inlets and outlets, but the basement will have a special treatment. Fresh air is brought from above the roof to an ozonizing plant, whence ducts will be carried to all parts, and the vitiated air will be withdrawn by suction fans.

The heating will be by hot water from calorifiers fed by steam boilers, which will also heat Messrs. Liberty's adjacent Regent Street and Little Marlborough Street premises.

The architects are Messrs. Edwin T. Hall, F.R.I.B.A., and E. Stanley Hall, M.A., F.R.I.B.A., of 54 Bedford Square, London, W.C.1.

Entrance to House at Tsi-Nan-Fu, Shantung, China.

This very clever design by Mr. Oliver Hill is remarkable for the manner in which an Eastern note in design is suggested without the use of any detail which can be termed Chinese in character, if we except the upward turn of the ends of the hips of the roof. Many designers would have conveyed far less "character" with the employment of detail directly taken from Eastern sources. We should like to illustrate scale drawings of what is a very interesting and exceptional essay in design, as it cannot be said that the coloured drawing does more than suggest the building shown.

New Books.

"The Architect and Builders' Handbook." By the late Frank E. Kidder. London: Chapman & Hall, Ltd. 40s. net.

* This is the seventeenth edition of this work, and it has been compiled by a staff of specialists under the editorship of Mr. Thomas Nolan. New chapters and illustrations have been added since the last edition, and a considerable portion has been rewritten, while the title has been changed from "pocket book" to "handbook." It will be realised that the term "handbook" is now more applicable when it is stated that there are nearly two thousand pages in the volume. The book provides data for architects, engineers and contractors on all matters pertaining to construction, and as the editor and associate editors are all experts in the particular subjects which they have been responsible for, the information given is reliable and well presented. Owing to the authors all residing in America the data are naturally based on practice in that country, but in spite of this the reader in this country will find a mass of useful information which is arranged in a convenient form and clearly expressed.

A. L.

S.S. Samaria.

In our mention of sub-contractors employed on the decorative work of the above liner we omitted the name of Messrs. Bellman, Ivey & Carter, who supplied the Scagliola columns in the dining and smoking saloons. These are, for the most part, fixed round steel columns without showing joints by a method which has been employed on ships belonging to the Cunard and other companies.

Notes and Comments.

The New County Hall.

The King's speech made on Monday at the opening of the new County Hall was, as usual, distinguished by that quality of sympathetic insight into the difficulties of a nation engaged in a hard struggle to regain its pre-war prosperity which has endeared His Majesty to the affections of his people. We had hoped that the occasion would have been marked by the bestowal of honours to the architect who won the competition and to the Council's first architectural adviser, whose insight and perseverance have resulted in the London County Council's architectural work being a legitimate source of pride to all Londoners. But we hope that both architects are marked out for future distinctions, as they have done good work both for their profession and for the public well-being for which it is the object of architects to serve. No great building can fail in being the mark for criticism, but we believe posterity will recognise and acknowledge that the County Hall is worthy of its function as the seat of the greatest municipality in British lands.

St. Paul's Bridge.

Lord Plymouth, Sir Aston Webb, and Sir Reginald Blomfield sign a joint letter to "The Times," in the name of the London Society, in which they protest against the building of the St. Paul's Bridge, in view of the fact that a bridge is urgently needed at Charing Cross and that one at St. Paul's will, now that Southwark Bridge has been completed, serve no urgent need. We quite agree with this action, and believe that the St. Paul's Bridge project has not even the firm support of the City, as is proved by its being referred back for further consideration. It will be remembered that the alignment for it chosen is neither a fine nor architecturally imposing one, and that it therefore stands, or would, if built, stand, condemned both on æsthetic and utilitarian grounds. But we should doubt whether, if the project is abandoned, the Bridge House Estate could or would contribute towards the cost of a bridge at Charing Cross, since it would be outside the confines of the City of London.

Terms Which Might Be Eliminated.

We have seen plans of American hotels where the best bedrooms were described as "Bridal Chambers," and have felt unwell, but we often see plans in which small studies are described as "Dens" and halls as "Lounge Halls." We expect these little vulgarisms in the auctioneers' inventories of the strong points of "Desirable Residences" or "Picturesque Villa Residences," but they should surely be eliminated from the terms used on an architect's plans. If the rooms referred to are not vulgar in reality, they must always convey an impression of vulgarity when described in terms which have not even the exotic charm of Americanisms. We remember a novel of Benson's in which a large riverside house is described by the owner as "a cottage in Buckinghamshire," but was neither a cottage nor in Buckinghamshire; but it is surely a vulgarism to go out of our way to invent new terms for what can be well and correctly expressed in plain English, or to call houses cottages and small buildings desirable villa residences. An agent may admit in conversation that he has a house to let, but in a written document the house always becomes a desirable residence or a cottage *ornée*.

Workmen's Rents in Berlin.

A contemporary compares the weekly rentals paid for a 4-roomed London dwelling, comprising local rates, and a 3-roomed Berlin flat. Before the war the cost of the accommodation in London was 10s., and subsequent to the war 15s.; the corresponding Berlin rates being 15 and 25½ marks. If rates are excluded, the comparison is 7s. 7d. to 10s. 6d. in London, as compared with 15 and 25½ marks in Berlin. In both countries the tenants have been protected by legislation from the natural advance in economic rentals. But, owing to the enormous fall in

exchange values, the Berlin rents expressed in terms of English currency are now 4½d. and in wholesale purchasing power about 7½d., a sum which should surely satisfy the most extravagant dreams of those who would wish to live cheaply!

Whitewashing the Abbey.

As we should naturally expect, the action of the authorities in sanctioning the application of a preservative solution called "whitewash" to the external stonework of the Abbey has been met with a storm of protest. We are asked to shudder by some at the thought of a whitewashed Abbey, while others draw imaginative pictures of the new beauties which will be revealed to us when the whole building is covered. We do not take either of these views, nor, we imagine, does Professor Lethaby, on whose advice the treatment is being tried. We are quite sure that were not Professor Lethaby convinced that the decay of the external stonework would not be arrested or largely retarded by so drastic a remedy, he would be against its application. But knowing that he would be less, and not more, unwilling than most others to carry out any so-called restoration, we feel he may be trusted to advise nothing which goes a step farther than the necessities of the case dictate, and we are willing to wait and see the results of the remedial measures applied without extravagant expectations of new beauties or equally extravagant fears that a coat of colouring matter can spoil a great masterpiece of mediæval art.

Vacancies for Architects in America.

The following letter from the President of the Pittsburg Chapter of Architects appears in the current number of the R.I.B.A. Journal, and may merit the attention of some assistants who are both in need of work and would like to gain some experience in America:—

DEAR SIR,—There is at present in our town a shortage of able and well-trained architects, assistants, draughtsmen, and even apprentices. So far as this goes, the same thing applies, I think, to most other American cities.

This office is in need of men to serve as draughtsmen and assistants. This is written with the idea that you might refer this letter to the proper organisation or individuals in England that might be interested.

If such should be the case we would like to enter into details regarding wages, transportation expense, if necessary, and length of service required to obtain from England the help which we need. There are in this city a number of good men who have come from England and Scotland by their own choice. We like them, and could at this time place more.

The idea is somewhat novel and might be difficult to work out, but we can at least make the effort. Thanking you for the courtesy of your attention.—I am, yours very truly,

EDWARD B. LEE, President.

If the shortage is as described, it should be possible for good men to secure definite appointments through the offices of the President of the Chapter, as a journey to America is not now as cheap as it formerly was, while living expenses are also high.

Sir Edwin L. Lutyens, R.A., has made the following statement concerning "The Queen's Dolls' House":—"So many unauthorised and inaccurate statements have been printed concerning the Queen's dolls' house, now in process of construction, that I should be grateful for a little space in order to explain the situation. The dolls' house, which is really a miniature model, so exact in every detail as to give it great historical value in the future, of what might be a Royal residence of the present day, is a gift to her Majesty from a number of personal friends, artists, craftsmen, authors and others. It is hoped that it will be completed in 1923, until which time all descriptions will be premature. Everything connected with it is of English make, and a number of skilled workmen in various industries are employed upon it and are being benefited by it; and it is intended that, when finished, and before passing to its permanent home in Windsor Castle, it shall be exhibited publicly, in order that charities in which her Majesty is interested will benefit also."

London Art Galleries.

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The New Society, which at the end of this month closes its second annual exhibition, is not this year of any exceptional interest. There is good work to be found, though it needs looking for; but there is nothing specially novel or brilliant, and the general average is not of the first order. In the watercolours in the North-West Gallery I picked out "On the South Downs," by Miss Peploe Earle: this artist, who is new to me, has another painting in the same room, which, with an attractive title, "The Promise of Spring," is not to my mind equal to her South Downs picture. In this room to be noted also are M. Chesterton's "Coming Storm" and "The Jetty"; D. H. Banner's "Blumlisalp," looking across the Lake of Thun; Agnes Kyle's "Limehouse in Early Morning," which recalls something of Bridget Keir's handling of these river-subjects; and a girl dressed as Harlequin, "Carnival," by S. S. Longley.

In the next (North-East) Gallery are three of Eva Savory's charming flower studies, of which I liked the iris lilies in "The Aristocrats" best, painted against a dark background; though the "Williamson Bowl" for actual painting of the flowers is quite as good. Miss Savory wisely pays attention to her framing as well as her backgrounds: the frames in every case here, whether oval or oblong, are harmonious and effective. A. J. Billingham has gone to Sussex for his subjects, and I prefer his "River Arun" in this room to the "Arundel Castle" in the room preceding; and I come now to the Central Gallery, which contains Bernard Munns' portraits of H.R.H. the Prince of Wales and of the Bishop of Birmingham, though for this artist's portrait of George Robey, a three-quarter length in "mufti," we must go to the small room beyond. Another portrait to be noticed in the large Gallery is that of Miss Sybil Thorndike, the well-known actress, whose creations in the field of Greek drama are so admirable, painted by Sydney Kendrick; a three-quarter length, dressed in blue, a good likeness, as it seems to me, well handled. On the next wall Donald Wood's "Horses Ploughing" shows strongly the influence of Lucy Kemp Welch, in whose animal school I believe this clever young painter at one time studied. On the same wall the Hon. John Collier paints in "The Blue Kimono" the lovely fair model who has often appeared in his recent work; though I am not sure if it is she who appears beside "The Oak Chest," which forms an effective background to the rich silk robes she is selecting. In figure work Leonard Fuller gets a wonderful sense of movement in his loosely finished "Sea Urchin" dashing through the waves, even more than Henry Haley in his more ambitious "Ariel," who appears floating in air before the wreck to answer Prospero's command

" . . . Be it to fly,
To swim, to dive into the fire, to ride
On the curled clouds. . . ."

With both these figure studies may be compared R. Wheelwright's "Shallow Waters," a bathing figure of a girl seated on the rocks, a careful study, but not more than this; and the Pierrot girl in C. B. Prescott's "Hush," next to the blonde of the "Blue Kimono," is not to be overlooked.

At the Fine Art Gallery in Cork Street (Messrs. Bromhead and Cutts) a very interesting "one-man show" is being held of the paintings and etchings of Theodore Roussel. Theodore Roussel is a modern artist of singular refinement and charm. The late Sir Frederick Wedmore has described him as "A Frenchman, owing something of his personal qualities, as ancestors on this side and on that have been responsible for them, to the Ile de France, with its suavity, and to the South (Dauphiné or Provence) with its unconquerable ardour"; but added: "Roussel is by long residence and by affection for this land, particularly this London, almost an Englishman. He came here very young some thirty years ago" (this was written in 1909), "established himself at Chelsea, and to whose but Whistler's influence could he in that day have gravitated? He was, in a sense, Whistler's pupil, and it was not long before he became, in a real measure, Whistler's friend—a friend often agreeing

with the utterance and conduct, but likewise privileged and certain, on not a few occasions, to disagree with the utterance and conduct of the Chief."

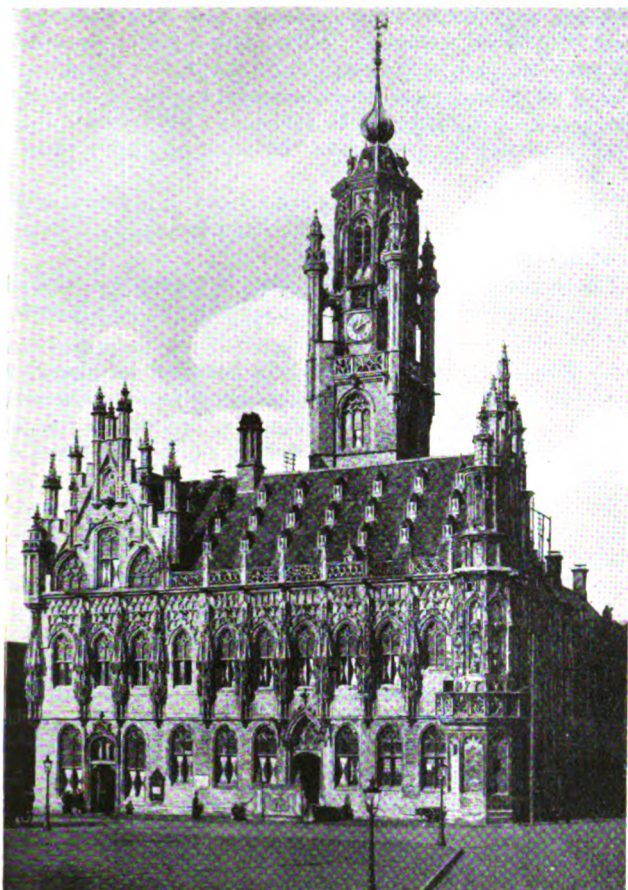
I have quoted these words from a delightful critic, whom it was my privilege to know personally and whose loss we still deplore, because, written, I believe, from personal knowledge, they give us the clue to many of the paintings shown here, notably to such subjects as "Steamers Off Dover," "Night Coming Over the Sea," "Richmond Park," and perhaps also "The Coming Storm, Dover," in which Whistler's influence seems markedly traceable. At the same time, as Sir Frederick remarks, Roussel was an artist who felt and thought for himself. He was a good figure painter, as we see in his oil paintings of "Persephone" here, in "The Chinese Gown" and "The Model Mending Her Drapery," a back view of a somewhat fleshy girl who seems to reappear in his painting (not shown here) of "Le Miroir"; though neither of these can compare with the nude of "The Reading Girl," "austere in its performance, restful in its effect," which the writer whom I have just quoted compares with Leighton's "Bath of Psyche" or with the beautiful and faultless "La Source" of Ingres. Another masterpiece of Roussel's art, also not here, and reminiscent of Whistler in its theme, is "La Nuit, Septembre, Chelsea," which was in Lord Grimthorpe's collection: but on the ground floor here we find eight delightful watercolours, a side of his art which is less known than the etchings, but which seem to me to possess very fine quality. Roussel is a known master of etching, as I have often had occasion to mention in these columns, and I will not, therefore, say more of those shown here.

At Gieves Art Gallery Mr. J. P. Wilderblood is showing a series of watercolour drawings of "Himalayan Snows and Indian Landscapes." This artist has already exhibited with success at the Simla annual exhibitions, where he won the Viceroy's Prize in 1914, and since then had painted, in the intervals of fighting, in Mesopotamia, and improved his technique by serious and sustained study. He carries us here among the eternal snows of the Himalayan mountains, which give many of his subjects, but has also several studies of the famous Taj Mahal from different points of view. One of the drawings which I like best here is the small study of the "Taj from River," which is very happily composed, and with this I should select his "Early Morning, Lucknow"; while the "Marchula Fields" give us an idea of the tremendous cliffs which tower above the passes leading from the plains of Upper India to the mountain ranges.

I am informed to-day by the authorities of the National Gallery that it is proposed, with permission of the Trustees, to give on Tuesday of this week a musical performance within the Gallery, by a string quartet from the Royal College of Music, with a selection from Beethoven and Haydn. I mention this, though the concert will be over when this goes to press, as, if it proves successful, it is a feature which may be continued. It is pointed out to me that concerts are very popular in the Metropolitan Museum of New York, and that our own Gallery possesses very fine acoustic properties, discovered some two years ago when the Dome Rooms were opened.

The recent sale (July 14) of the Ralph Brocklebank collection at Christie's marks one of the last really important art sales of the season. The price given for the Botticelli roundel of the "Nativity"—£525—does not seem a high one, but the fine Franz Hals portrait brought £6,510, and it seems a question if the best of the Dutchmen do not sell as well as the Italians. The remarkable painting by Rosselli, a panel described in the catalogue as "Crucifixion," brought £1,732. The figure here is richly dressed and crowned, and may represent not Christ on the Cross—as the catalogue states, following Crowe and Cavalcaselle—but a Sicilian saint, S. Wilgfortis, who, in answer to her prayers to escape from a distasteful marriage, was supplied with the beard which she is wearing here. The painting itself is of high merit.

S. B.



STADTHUIS OF MIDDELBURG.

Old Dutch Architecture in Walcheren.

By Selwyn Brinton, M.A.

I had last year the good fortune to visit, as one of the members of a delegation from the British International Association of Journalists, the cities of Belgium and battle-fields of Flanders. Last month I was able, under the same auspices, to visit Holland; and the one visit forms the appropriate complement of the other. After Ghent, Bruges, Brussels, Louvain, Namur, Liège, Tournai, Mons, each with their individual features of interest in art and architecture, I came now to see the great centres of northern Holland, Rotterdam, Amsterdam, The Hague, and such quieter old Dutch cities as Delft, Haarlem and Leyden; and it was interesting to note the points of likeness between two countries, which should have remained one in the hopes and life-work of that great statesman William, Prince of Orange, as well as the differences caused by race and religion.

Our visit commenced, with my own approval and, I think, very fortunately, with the Island of Walcheren; and no more delightful opening could have been found for such an excursion. We were met by the Mayor of Flushing, with a reception committee, including several ladies, and also by four girls in their picturesque national costume, who presented us with flowers. I mention this feature of our reception particularly because it is of interest to note that all through this Island and elsewhere in Zeeland the women wear habitually this costume—the tight black bodice, short sleeves and open neck, the large white caps, varying according to the village or island whence they come, and very full skirts, which give the impression of a small waist and wide hips, this effect being attained by numerous petticoats, often from four to ten (I have heard in one case of as many as seventeen), worn one over the other. Before I left Middelburg I had an opportunity of sketching one of these maidens, and was able to examine the ornaments of solid gold worn habitually at the corners of the cap in front,

perhaps originally as weights to keep it in place. When later we came to visit Vollandam and the island of Marken, the "dead cities" of the Zuyder Zee, we saw costumes which were more elaborate and perhaps more picturesque—that of Marken with the little cap and side curls being notably so—but which seemed purposely worn to attract the tourist armed with his camera or sketch-book. In Walcheren there is nothing of this kind. The costume is simply the daily dress of the women and children, more elaborate perhaps on fête days, but belonging to their habitual life and work; and nothing can be more charming than a little Dutch girl of—say—twelve to fourteen in this costume finished off with a pair of wooden shoes.

Flushing is an important and growing port, through the Flushing Royal Mail Route (Zeeland Steamship Company) a link between our own country and Central Europe, with large docks, which we duly visited, and a charming little "place" outside the town, which seemed to me fully as attractive as that of Domburg on the north of the island, save that this latter possesses excellent golf links. But if we want the architecture of old Holland we must go on to Middelburg, which we reach from Flushing by train or by an excellent tram service in about a quarter of an hour's run. Middelburg goes back to mediæval Holland, and played an important part in the struggle for the liberties of Holland against the cruel Duke of Alva, whose barbarities, in the name and at the express orders of his master, Philip, King of Spain, had roused the people to desperate resistance. In Middelburg, the last point held by King Philip in the Island of Walcheren, the Zeelanders held Mondragon, Alva's lieutenant, closely besieged, and when a Spanish Armada was sent to relieve the city the "Beggars of the Sea" proved their superiority, the fleet of Romero was completely beaten, and Mondragon forced to surrender, leaving the Hollanders and Zeelanders masters of the coast. The earliest monument of the city is the Abbey of St. Nicholas, which was founded in 1106, and richly endowed and increased in the century following: but it has suffered terribly from fires in the XVth and XVIth centuries, and though rebuilt each time and more recently carefully restored, it is evident that much of the old character has suffered. The cloisters are fine; and some of the rooms, such as the large hall hung with tapestries representing the battles between the maritime provinces of Holland and the Spaniards, designed by craftsmen of Delft and Middelburg, are of fine proportions, while the crypt is ancient. But the special glory of Middelburg is her Town Hall, which has been justly called one of the finest buildings in Holland. Its style is late Gothic, for it was built early in the XVIth century from the designs of Anthonis Kelderman, with a noble tower, 180 feet high, dating from 1507-13 and a florid façade of the latter date, adorned with statues of the Counts of Holland and their wives. Here we have a building which has been, and—one might say—is still being (for the scaffolding was still up in one angle), carefully and, on the whole, successfully restored. It commands the market place, and is a typical municipal building of old Holland; and here too some of the interior reception or court rooms, such as the old "Viershaar" or court-room on the first floor lined with panelling, are of fine proportions, while the



ABBAY OF MIDDELBURG.

Museum here contains portraits of some of the great Dutch captains who fought against us in the XVIIth century.

Middelburg contains many other houses of the old time, such as "De Gouden Zonne" (The Golden Sun) built in 1635, and with fine façade adorned with the arms of its owner, William Quirynssen, merchant and Burgomaster of this city, and the house called "De Steenrots" (The Rock), built in 1590 in the Renaissance style by Andries de Valckenaere, and now owned by the Society for the Preservation of Middelburg's ancient buildings. Here the reliefs on the front are of interest, with subjects from Bible story, portraits of Roman emperors, and those of the patrons of the Bricklayers' Corporation, as well as reliefs showing the processes of stone-cutting, for Valckenaere seems to have been himself a mason.

But the artistic interest of Walcheren centres in the old "dead city" of Veere, to be reached easily by road or cycle path (these last are a successful and practical innovation in Holland, where every third person is a cyclist) from Middelburg, and remaining untouched, unspoilt from the days of its greatness. Here the fine old Town Hall rivals that of Middelburg in its Gothic design, but remains happily unrestored. It was built from 1470 to 1474, but the steeple, with its clock-work and chimes, is more than a century later (1591-95): the spire of this steeple carries a gilt ship, for Veere was in those days a great sea-port for the East India trade. As in the Middelburg Town Hall so here too the façade carries a line of statues, of the former Lords and Ladies of Veere. The cathedral, of fine proportions, was burnt down in 1686, and altered when rebuilt, though evidently following the old lines of design: it is now a church for the Dutch Reformed community. Most interesting here are two old Dutch houses, the "Scotch House" (Schotsche Huis) and "The Little Lamb" (het Lammetje): the latter of these has been purchased by the State, and the former belongs to an English lady. I was kindly permitted to see the interior, which is almost a museum of beautiful objects connected with Walcheren, and preserved as a typical Dutch house of the old time. What wonder that many artists, as its owner told me, find their way to old Veere, which breathes the very spirit of Holland of the past, and almost justifies the remark, made, I believe, to a well-known Venetian artist: "If you have not seen Veere you have not seen Holland."

State-Aided Housing Fees.

We have received from the Royal Institute of British Architects the following document, over the signatures of Mr. Herbert T. Buckland, F.R.I.B.A., Francis Jones, F.R.I.B.A., and Mr. Herbert A. Welch, A.R.I.B.A., relative to "Fees payable to Architects in connection with Abandoned Schemes":—

It will be recollected that on the issue by the Ministry of Health of General Housing Memoranda 51 and 52, the profession generally felt that the extent of the services rendered by them to their clients, and through their clients to the State, had not been fully understood or appreciated, and the scale of payment therein set forth was considered to be inadequate. The members of the R.I.B.A. thereupon elected representatives to re-open negotiations with the Ministry for the purpose of revising the terms of these Memoranda.

Prolonged negotiations between the Ministry of Health and the members of the Royal Institute of British Architects revealed difficulties on both sides, but have resulted in an agreement being reached on the question of payment to architects for work upon schemes which have been wholly or partially abandoned.

In their consideration of the many cases of hardship submitted to them, the representatives of the R.I.B.A. were impressed by the unequal application of any flat rate scale of payment to partially and wholly abandoned schemes and to large and small schemes.

In the revised terms effect has been given by the Ministry to the claim that the fees for partially abandoned schemes should be more equitably apportioned in relation to the amount of the scheme which has been carried out, a more

generous proportion being paid to those who have had very little work executed. Also a new scale of payment has been adopted, giving still more favourable consideration to those architects whose schemes have been entirely abandoned as compared with those who have carried into execution a fair proportion of the work originally placed in their hands.

These terms and conditions are set out in a new memorandum to be issued by the Ministry known as General Housing Memorandum No. 61.

The main points in which this Memorandum differs from or supplements G.H.M. No. 52 may be briefly summarised as follows:—

(a) Whereas G.H.M. No. 52 only provided for charging to the Housing Assisted Scheme Account fees for schemes which were approved by the Minister, in G.H.M. No. 61 provision is made for the consideration of schemes not so approved.

(b) In regard to work on roads and sewers, the fees have been more accurately apportioned to the stages which the work had reached when it was abandoned.

(c) Average prices per house have been agreed as the basis on which fees for abandoned work should be calculated in respect of plans which were prepared before July, 1921, and subsequently.

(d) In partially abandoned schemes instead of half the fees for totally abandoned work being paid in all cases, the fraction payable is related to the proportion of the scheme carried out.

(e) A more generous scale of payment has been adopted where the whole of an architect's work has been abandoned, and it has been provided that the R.I.B.A. will act as a Board of Reference in deciding certain points in this connection.

(f) It is provided that the local authority shall be satisfied as to the respective stages of the work carried out, and the appropriate fees.

(g) The settlement does not supersede cases where an agreement providing specifically for abandoned work has been made between the architects and the local authority, their clients, or where a final settlement has already been arrived at.

(h) The term "scheme" used in G.H.M. No. 52 has been more favourably interpreted in relation to abandoned work in G.H.M. No. 61.

(i) Travelling expenses have been provided for in G.H.M. No. 61 on a more reasonable scale.

(k) Under G.H.M. No. 61 payment may be made in certain cases for the preparation of additional copies of drawings and specifications.

(l) The Ministry are requesting local authorities to expedite the settlement of accounts with architects.

It is satisfactory to note that by the re-opening of negotiations terms have been agreed which will result in a greater appreciation of the services rendered by the profession, and a scale of remuneration more in accordance with its labours.

It is desired to place on record appreciation of the manner in which our deputation was received by the Ministry, and the sympathetic consideration given by the Ministry to the case presented by the deputation.

The Institute are not inclined to think that the Association of architects and local authorities in connection with municipal housing schemes is at an end. They believe that in many cases local authorities will proceed with their schemes on their own account, and that architects will resume their work on these schemes.

For the guidance of members, examples of the application of the revised scales have been worked out in conjunction with the Ministry; copies of these examples, showing the manner in which the fees are calculated, also the average cost of houses in the months subsequent to July, 1921, will be supplied on application to the R.I.B.A.

(Signed) { HERBERT T. BUCKLAND, F.R.I.B.A.
FRANCIS JONES, F.R.I.B.A.
HERBERT A. WELCH, A.R.I.B.A.

11.7.22.

The Grand Tour of an Architect.—II.

By W. H. F. Basevi.

While Basevi stayed in Florence in the autumn of 1816, devoting his mornings to the art galleries and his evenings to the social pleasures of this cosmopolitan town, the idea of prolonging his tour into Greece began to take hold on his imagination.

His father about that time suffered financially through the mismanagement and misfortunes of the London Docks, in which he was a considerable shareholder, and was therefore reluctant to incur the additional expenditure. But in the end persistence won, though not until his son had spent nearly two years in Italy.

Among other causes which turned his mind towards Greece was the accident of meeting Williams, the landscape painter, in whose company he visited Tivoli. This was Hugh Williams, known afterwards as "Grecian Williams," owing to the popularity of his water-colour drawings depicting the ruins and famous scenes of Greek history. Examples of his work may be seen in the National Gallery of Scotland, and in the historical collection of South Kensington; while his portrait, by Sir Henry Raeburn, is in the National Portrait Gallery, London. "Mr. Williams, by constantly drawing among the ruins and by colouring them on a large scale, has gained a great name here. He certainly is very clever, but to my mind not very first rate."

Another companion during this visit to Tivoli was John Bryant Lane. Basevi met him in Rome, and was, it seems, the only person privileged to see the gigantic picture of the "Vision of Joseph" while it was in progress. Basevi describes him as "the only English artist protected here. Four English gentlemen have subscribed fifty pounds each to pay his expenses. He appears to be a young man of very great talents, and we are pretty intimate to my great joy."

Two men who appear to have had a stimulating effect on Basevi's mind, and in their turn were interested in him and introduced him to people of note in the artistic world, were a Mr. Wharton and Mr. Ahublad, an Oriental scholar and antiquarian. Of his first meeting with Mr. Wharton he writes: "He received me very kindly. He spoke to me much of young Mr. Cockerell, who has obtained much credit here by arranging the groups of the Niobe in a pediment, and giving tolerable satisfactory proofs that they originally were so placed perhaps in the pediment of a temple to Diana or Latona. Tell this to Uncle D'Israeli: it will afford him something to speculate upon." By a strange coincidence twenty-nine years later it was Cockerell who was selected after Basevi's death to continue the building of the Fitzwilliam Museum at Cambridge, and many of the interior finishings are from his design.

On another occasion he says: "Yesterday morning I paid Mr. Wharton a visit. In conversation he asked me if I had ever taken the dimensions of the Strozzi and Pitti palaces, as, when Strozzi built his, Pitti was so enraged to be outdone by his rival that he said he would build a palace so large that the Strozzi one should be able to stand in the courtyard. He ruined himself in the undertaking, and the palace was immediately bought up by the Medici, and the Grand Duke now inhabits it. This is a curious circumstance, and I shall therefore take the dimensions of the two palaces and give them to Mr. Wharton."

Through Mr. Ahublad he got to know James Millingen, archaeologist and medallist, who was the author of various works on coins, medals, Etruscan vases, and kindred subjects. He bought antiquities with rare judgment and supplied most of the great museums of Europe with their choicest specimens. This acquaintance, begun at Florence, ripened in Rome, where the elder man encouraged and assisted the young enthusiastic student. "I have just returned from Mr. Millingen, the great medallist, whom you, of course, know very well by reputation. But you will like to know first how I got there. Mr. Ahublad, a great Oriental scholar and antiquarian, presented me to him this morning, and he invited me to a conversation that he

held in the evening. I had travelled from Chambéry to Turin in the same diligence with him without ever once hearing his name. He recognised me immediately, as we always clashed together each night, as he wanted a room to himself and I wanted a room to myself. He has promised to show me his medals and drawings, has given me a general invitation to his house, and likewise introduced me to Mr. Gadvek, who has made so much noise on account of his drawings taken in Greece. He has asked me to come and see them. . . . Mr. Millingen has offered to introduce me to the first French architect here. I already know several, and on my return (from Tivoli) am going to see several drawings and designs of the architect who superintends the searches for discoveries here. What a deal of good the French did in that respect! Had they but held Italy for two or three years more the antiquarian would have no reason to dispute on any of the remains here; but the Pope immediately on his arrival stopped all the works, and proceeds in a most meagre manner. The English are very anxious about what is being dug at present, and I should not be very much surprised to hear of a party of them subscribing to place more men at work."

When this was written Basevi had already reached Rome, where he lodged at the house of the Marquis Cordelli for twenty crowns a month. The letters of introduction he had brought from England and recommendations from the friends he had made in Florence brought him more invitations than he could accept, as he soon found that too many social amusements interfered with his studies. It was fashionable at that time to dabble in architecture and archaeology, subjects which in England interested nobody, and Basevi notes this, not without satisfaction, at the first reception which he attended. "The concert was brilliantly attended by all the first English here, and by an innumerable multitude of counts, marquises, etc. I saw Broom in conversation with the Marquis of Lansdowne, the Countess of Westmorland, Lady Hamilton, and several other of the English noblesse. Depend upon it, there will be for the future more encouragement given to the architects, for here everybody endeavours to study it; some even take masters. This is all nonsense, but the thing takes very much."

"My sketches in the Campo Vaccino and about the ruins increase daily. The other day I breakfasted with Mr. Duncan, who afterwards took me to see the collection of the gentlemen who are talked of, and considered two of the best here. How they got their reputation I know not. But really the amateurs or connoisseurs have no idea of the real meaning of the word 'sketches.' They seem to think that celerity gives merit. Now I do not profess to meet these gentlemen on this point, though I know I could beat them here if that was all my aim. But I take an ampler field. I am not content without truth and composition, which are words not to be found in their vocabulary."

"For society and comfort Florence is the place to live in; for the arts, certainly Rome. I was not much struck on my first entering the city. The palaces, though extremely magnificent, I fell abusing for the meretriciousness of their designs."

Apparently it was his nature, due perhaps to a strong critical faculty, to be arrested at first sight by imperfections and faults of taste, and only by slow degrees to be able to disregard the unpleasing elements and surrender himself to the real beauty underlying them. For we find the same hesitancy to appreciate even St. Peter's.

"For the first few times I was in it I could not but quarrel with its imperfections; but now, these grown a little familiar, I almost wonder at my blindness in not having before perceived how small they weigh in the scale of its great beauties. It really makes me quite melancholy to see how little I am advanced in my studies. It sometimes makes me work harder, and at others makes me fret and almost despair of doing anything in this life."

The opening months of 1817 were an interesting period of Basevi's sojourn at Rome. The circle of his friends and acquaintances had considerably increased; and not only did he enjoy the social pleasures natural to a young man of his age, but in the society of artists, archæologists, and other men of learning and intelligence, and amid the clash of ideas inseparable from friendly discussion, he acquired a discriminating attitude of mind, an acquaintance with art in many forms, and a more profound insight into its mysteries. All this he brought to bear upon his special subject, while his zeal and his skilful draughtsmanship aroused the interest of many older men, who gladly gave him encouragement and assistance. He tells, for example, of Mr. Carrigan, "head of St. John's College, Cambridge. He is a monstrous clever man, and has taken a fancy to me. I derive much instruction from him; for he frequently comes and drinks tea with me, and sometimes comes and sits by me while I am drawing, giving me a succinct history of what my pencil describes." To Ervine and Williams, now become old friends, he expresses his gratitude. "I reckon myself extremely fortunate in having met them. They are men of such exquisite taste that I am more indebted to them than you can imagine for the insight they have given me into composition, light and shade, etc."

All the time he is hard at work sketching out of doors. "I am sure I am improved amazingly. I have just finished a large drawing of the Colosseum, bigger than what I did of Mr. Soane's monument. It has given satisfaction to those who have seen it, and may perhaps give me some name. . . . I now begin to find that I might have been bolder in entering into competition with the Campo Vaccino drafts than I was, as I fancy I know more about the matter than any of them. I now really am studying hard. I feel myself at this moment in a very critical period. I almost fancy that I see the scales hang over me that are to determine my future success. My eyes are open more and more every day not only to the beauties, but the intricacies of my profession, and I feel my taste as if wavering before it finally fixes upon a model to form itself on. I have fortunately found a friend who has lent me Reynolds' lectures. What incomparable advice is contained in them! I read them at every spare moment, and learn more and more from them each succeeding day."

(To be continued.)

Competition News.

The design of Mr. J. A. Glen, 72, Croft Road, Cambuslang, has been awarded the first prize in the competition inaugurated by the Cowal Highland Games Committee, among Glasgow School of Art students, for the best model group depicting the throwing of the hammer, putting the ball, and tossing the caber. A facsimile in silver, presented by Sir William Sutherland, will be a special prize in these events, Lady Sutherland presenting the winner of the design competition with a gold medal.

The Secretary of the Royal Institute of British Architects has cabled to the promoters of the Colombo Town Hall and Municipal Offices Competition, pointing out the inadequacy of the time allowed to competitors in this country (November 1, 1922), and urging that an extension of time should be granted. The Municipal Council of Colombo invites architects to submit designs in competition for a proposed new Town Hall and Municipal Offices on a site in Victoria Park. The cost should not exceed Rs.1,000,000. Premiums of 5,000, 3,500, and 2,000 rupees will be awarded, subject to the terms of the "Conditions," to the designs placed first, second and third respectively. A Fellow of the Royal Institute of British Architects will act as Architectural Assessor. Conditions of competition and all further particulars may be obtained on application to the Secretary, Municipal Council, Colombo, accompanied by a deposit of 25 rupees, which will be refunded on receipt of a *bona fide* design. The architect selected to carry out the work will be paid in accordance with the Schedule of Charges sanctioned by the Royal Institute of British Architects.

"The Chicago Tribune" was founded on June 10, 1847. In commemoration of its seventy-fifth anniversary it proposes to erect "a magnificent new home, which it hopes to make a monument of surpassing beauty, an inspiration for newspaper publishers everywhere, and a home worthy of the world's greatest newspaper." Seeking the best possible design for this building,

"The Chicago Tribune" offers 100,000 dollars in prizes to architects. The contest, which will be open and international, will be conducted under the rules of the American Institute of Architects. Each competitor will be required to submit drawings showing west and south elevations and perspective from the south-west, but no detailed plans of specifications need be made. Applications for entry must be filed before August 1, 1922. Drawings must be submitted between then and November 1, 1922. Architects desiring complete information and applications for entry should write at once to Colonel R. R. McCormick and Captain Patterson, editors and publishers of "The Chicago Tribune," at the office of "The Chicago Tribune's European Edition," 5, rue Lamartine, Paris, France.

The Crown Brewing Co., Ltd., Bury, invite competitive plans and scheme; for rebuilding one of their licensed premises, particulars will be found in our advertisement columns. No assessor is announced.

Reconstruction of Belgium.

The Commercial Secretary at Brussels has reported to the Department of Overseas Trade that in the course of a debate in the Chamber of Representatives on the budget of the Ministry of Economic Affairs, M. Van de Vyvere gave the following figures regarding the reconstruction of the country:—

By May 31, 1922, out of 78,000 buildings which were destroyed, 52,000 had been rebuilt.

Workmen's houses have not been neglected; a sum of 3,000 francs has been granted for each house whose value before the war did not exceed this amount, and 30,076 subsidies have been granted, of a total value of 9,228,000 francs. Moreover, 13,169 houses, of a total value of £193,015,259 francs—that is to say, an average of 14,000 francs each (*i.e.*, the cost of a workman's dwelling)—have been reconstructed. In addition 1,150 workmen's houses have been built where there appeared to be need for them, apart from the ordinary reconstruction claims.

Out of 23 secondary schools which were destroyed, 17 have been rebuilt or are in the course of construction; of 248 higher grade schools, 146 are rebuilt or being rebuilt; out of 253 board schools, 162 are rebuilt or being rebuilt.

Out of 1,100 public buildings destroyed, 500 have been reconstructed and 186 are in the course of reconstruction. In addition, the communal authorities have claimed the indemnities due to them, and have reconstructed 150 communal buildings themselves. In all, 836 public buildings have been restored. Of roads, 2,165 kilometres have been relaid, and 54,000,000 francs have been spent on the restoration of bridges, culverts, etc.

As regards indemnities, priority is given to ex-combatants, wounded soldiers, the disabled, and orphans of deported Belgians who died in exile. All who claim this priority are attended to first; after them come the necessitous, and then those who have lost all their possessions.

It is true that after the claim has been admitted there is an interval of about three months before payment is made, but this cannot be avoided.

Monsieur de Liedekerke, the "rapporteur," dealt with the question from a financial point of view. By the end of 1922 Belgium will have spent approximately 16 milliards of francs on the restoration of the country, and will have received 4 milliards. There will therefore be a deficit of 12 milliards, to which must be added all the *Dommages de Guerre* bonds in circulation, amounting to from 3 to 3½ milliards. Advances made by the Government to various industries amount to 1½ milliards. There will also be 1½ milliards for the restoration of property in the various departments of the Government.

Mr. Eugene C. Beaumont, M.S.A., informs us that he has taken his son Mr. E. Edward Beaumont, A.R.I.B.A., into partnership, and that the practice will continue to be carried on of architects and surveyors, at 134, Fleet Street, London, E.C., and at Sidcup, Kent, under the title of Eugene C. Beaumont and Son.

A meeting in connection with the Feodora Gleichen Memorial Studios for Women was held on the 12th inst. at Burlington House, Piccadilly. Lord Plymouth presided, and among those who spoke were Sir Aston Webb and Sir W. Goscombe John. It was explained that a small committee of architects, sculptors, and others interested in the work of the late Lady Feodora Gleichen had been formed with the object of raising £10,000 to build and £15,000 to endow a number of studios in London for the use of women sculptors, on completion of their studentship. Hitherto women students of sculpture had found their only opening among jewellers and silversmiths, and after taking up that small work they seldom returned to true sculpture.

Studies of the English Sculptors from Pierce to Chantrey.*

XVI. Some Minor Sculptors.

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QUELLIN TOMB, OR "TEARS OF TEN THOUSAND,"
WESTMINSTER ABBEY.

Before concluding our series with the resounding names of Banks and Bacon, we propose to devote a couple of chapters to the minor sculptors of the period of which we have been treating, since so little is known about them that the substantial additions to our knowledge offered by Vertue's notes are well worth printing.

I.—QUELLIN (OB. TEMP. JAMES II.).

Walpole tells us that this sculptor settled in England and was "concerned in several works, which, by the only specimen Mr. Vertue mentions, I should think were very indifferent, for he carved Mr. Thynne's monument in Westminster Abbey." Dallaway adds that he was the son of Artus Quellin, of Antwerp, which information he doubtless derived from Sandrart (vii. pp. 356, 383), according to whom the father was a pupil of Fiamingo, and the son "of the same name" executed the Thynne monument, which other authorities ascribe to his brother Thomas. Whether, then, the artist were Artus the younger or Thomas, he was, Vertue tells us, the eldest son of the famous Artus, and is said to have died in London at the age of 33, when engaged upon some work for James II. and, as we have seen in the chapter on Gibbons, the statue of Charles II. at the Royal Exchange, though designed by Gibbons, was, according to Vertue, entirely executed by Quellin, who also carried out the casting of Gibbons' statue of William III. at Dublin on College Green. Vertue's account of him is found in a notebook of 1732-6:

"Quellin of Antwerp the Statuary, when he was here, he had also a brother a Statuary, who went from Leure to Copenhagen in Denmark, got great employment there and at Dantzick and Hamburg—and in about ten years more made his fortune, return'd to Antwerp and there dyd, left a widow, an Englishwoman, who marryd another husband

that run it all out. Scheemaker who workt at Copenhagen saw many of his works and commended them much. From France the Academy at Paris came into England Pet' Eude—painter of portraitures and Hist [ory], he afterwards went to Scotland—of him Mr. Carpenter Statuary learnt the rudiments of drawing.

"Mr. Quellin Statuary of Antwerp—son of the Famous Quellin of Antwerp—the eldest son settled here made several great and valuable works, besides Esq^r Thinn's Monument Westminster. He was a tall well shaped man, wore his own hair, livd in an old great house in Tower Street next (where is now) the Seaven Dyals, and there dyd in the prime of his days aged about 33—In the Reign of K. James—his brother went to Denmark, the widow of this Quellin Married Mr. Van Ost of Mecklin who when Quellin dyd was his foreman and afterwards became a master of reputation and left behind him a good fortune—and left a nephew of his name, who drove on the business but never studied nor did himself any thing tolerable."

This rather confused account makes it clear that it was the elder son who executed the Thynne monument and died young, and whose widow married Van Ost, of whom more anon, and the younger who executed various well-known works in Denmark and the German towns, the most famous of which is the von Spark monument in the Marienkirche at Berlin. Our hopes of identifying other works by English Quellin, as we may call him by way of distinction, is, however, small, and we must be content to chronicle the Charles II. and the Thynne, the former still standing inside the present Royal Exchange, the latter one of the most popularly interesting works in Westminster Abbey. Thomas Thynne of Longleat, the Issachar of "Absalom and Achitophel," who had married the heiress of the Percy estates, was murdered by Count Königsmarek, her infamous suitor, when driving down Pall Mall, and the Whig party making political capital out of the crime, which they alleged to have been committed by the enemies of Thynne's friend, the Duke of Monmouth. Thynne was buried in Westminster Abbey with a cherub above his recumbent figure pointing originally to a gushing inscription which the good taste of Dean Sprat caused to be erased and the present simple one substituted. A representation of the crime on the pedestal below led to one of the most celebrated jests in "Joe Miller." "A Welchman, bragging of his family, said his father's effigy was set up in Westminster Abbey; being asked whereabouts, he said, 'In the same monument with Squire Thynne, for he was his coachman.'" As a representation of the carriage and horseman of the period the relief has considerable value, and the sculptor must have been very young when it was executed, since he was only 33 at his death, between 1685 and 1688.

II. JOHN VAN OST OR NOST.

We have seen that the widow of Quellin married his foreman, "Van Ost of Mecklin," who carried on the business after his master's death and apparently anglicised his name, since as John Nost he was employed as "carver" to William III. at Hampton Court [Law, vol. iii. p. 139], with whom, Sir Laurence Weaver tells us, he came to England. This, however, cannot be the case, since he was Quellin's foreman during the reign of James II.; what is certain, however, is that he developed Quellin's business and became head of a large sculptor's yard between Devonshire House and Hyde Park Corner, the earliest, it is said, to make a regular practice of turning out garden figures; this yard was later acquired by Sir Henry Cheere. In a familiar passage Ralph, the historian and pamphleteer, speaks of this and other sculptors' yards in terms far from complimentary. "Between Devonshire House and Hyde Park Corner there is nothing more remarkable, except the shops and yards of the Statuaries; and sorry I am that they offer a judicious foreigner such flagrant opportunities to arraign our taste. Among a hundred statues, you shall not

* For preceding articles in this series see:—Introductory Article, July 1; Nicholas Stone (1587-1647), July 8; Edward Pierce (ob. 1698), Sept. 2; Caius Gabriel Cibber (1630-1700), Sept. 16; Grinling Gibbons (1648-1721), Sept. 30; John Bushnell (d. 1701), Oct. 7; Francis Bird (1667-1731), Oct. 21; Peter Scheemaker (1690-1771?), Dec. 9 and Feb. 10; John Michael Rysbrack (1693-1770), Mar. 3 and April 7; Louis François Roubiliac (1695-1762), April 21, June 16 and June 23; Joseph Wilton (1722-1803), June 30.

see one even tolerable, either in design or execution. I attribute it to the ignorance and folly of the buyers, who, being resolved to have statues in their gardens, first make a wrong choice, and then resolve to purchase their follies as cheap as possible."

But if John Nost ran through his wife's fortune, as he apparently did, since he was sold up in 1711, he made another of his own. With his pupil Carpentier he was largely employed at Canons by the Duke of Chandos, in whom so many artists of the period found a patron, and executed an equestrian statue of George I., of which we shall hear again. Another important work by him was the splendid monument for John [Digby] Earl of Bristol at Sherburn in Dorsetshire ["Gent's Mag.," 1818, p. 597]; but the best example of his skill is the admirable statue of Sir Robert Geffrye, Lord Mayor of London (1613-1703), which stands over the Geffrye or Ironmongers' Almshouses in Hoxton, a picturesque group of one-storeyed buildings dating from 1715, which, since 1914, have been used as



SIR ROBERT GEFFRYE, by JOHN NOST VAN OST or NOST, Geffrye Museum, Hoxton, by permission of the L.C.C.

the Geffrye Museum of Furniture and the domestic arts. Nost's statue, here reproduced for the first time by permission of the London County Council, is a most competent piece of work, the best lead figure in London, except that of Sir John Cass by Roubiliac, of which something has been said already, and it has this advantage over Roubiliac's that it still stands in its original position.

We have mentioned the George I. at Canons, but it has only recently come to light that a second version of this work was executed by the sculptor, the whole story being told for the first time by Mr. Gatlif in his "Mary Davies and the Manor of Ebury." This is no other than the once famous equestrian statue of George I. in Grosvenor Square, which had disappeared by the middle of the nineteenth century, but is well known from engravings. "On July 26, 1725," we read, "articles of agreement were drawn up between a sculptor named John Nost, of the parish of St. George's, Hanover Square, and Sir Richard Grosvenor of Eaton," wherein Nost "for himself, his executors and assigns, doth truly covenant . . . that he . . . within and

on this side nine Callendar Months . . . will make fix place and set up . . . the Statue of his present Majesty King George on Horseback in lead and gilt, and also a stone pedestall for the same to be placed upon . . . and each of them to be made and done by the same height or bigness and in all and every respect in the same and like manner with the statue of his said present Majesty on horseback which is now on a Stone pedestall at the Seat of his Grace the Duke of Chandos called Cannons at Edger in the said County of Middlesex (the carving of the pannels of the said Stone pedestall and the dress of the said Statue at Cannons aforesaid only Excepted) it being hereby agreed . . . that the said statue . . . shall have and be in a Roman Dress or Habit." The price agreed upon was £262 10s. This agreement not only confirms Sir Lawrence Weaver's conjecture that the statues were replicas, but disproves the usual statement that the Grosvenor Square statue came from Canons. Canons, in fact, was not dismantled until 1747, when the George I. was erected in Leicester Square by Frederick Prince of Wales to annoy his father George II., who had been on the worst possible terms with his father, George I.; thus for a considerable period there were actually two gilt lead statues of George I. by the same sculptor in two London squares. No. 2, the replica executed for Grosvenor Square, was damaged, by Jacobites probably, soon after its erection, since the sculptor received £7 for mending it on May 25, 1728; the bill "for mending the Statue of ye King and Horse, a new sword and Truncheon, Putting one Legg on Guilding the same and other places" is still in existence, and strikes one as amazingly moderate. No. 1, the Canons-Leicester Square statue, was not removed till 1872, when it was in a ruinous condition and was taken down and sold for £16. Malcolm, in his "London," speaks of "Van Ost of Hyde Park Corner" modelling his George I. of 1721—i.e., the Canons figure—on the famous Charles I. of Le Sueur, and the engravings show that this is probably correct.

Nost's garden work is more famous than his statues, and the reader must be referred to Sir Lawrence Weaver's "English Lead Work" for a full and admirably illustrated account of the subject. We read of "a Young Triton with brass pipe in middle," of blackamoors and amorini, of Perseus and Andromeda, of the Flying Mercury of John of Bologna—we must pause to note an allusion which has escaped Sir Lawrence, namely, that Goldsmith's cottage "eight miles down the Edgware Road, at the back of Canons," was laid out with Flying Mercuries and other ornamental figures—copies of the same sculptor's Rape of the Sabines and Samson slaying a Philistine, wrestlers classical and otherwise, classical subjects, Harlequins, Columbines, Punch, Roman soldiers, gamekeepers shooting, gladiators, vases, &c., &c. Nost also dealt in animals, as we see from Captain Goff's bill of 1724 (Weaver, p. 194) for "2 Estridges 6 feet high," and "2 Cocketresses," the first pair costing £20, the second £7. Of the artistic value of much of this lead work Sir Lawrence Weaver's book will give some idea, although its scope does not include all the work we have dealt with here, nor does he mention Vertue's notes upon the sculptor, here for the first time given. Who the nephew was, of whom Vertue speaks, is uncertain; of Nost's son, who, oddly enough, appears to have dropped the anglicised form of name adopted by his father, we shall have much to say in a future chapter.

The first A.A. annual excursion held since 1914 will take place between September 22 and 30, and will be to Holland. It is proposed that Amsterdam should be the centre, from whence various excursions will be made to Haarlem, Delft, Zuyder Zee, etc. The old and modern architecture of Amsterdam will be visited under the guidance of Dutch architects, and also the great housing schemes which have aroused much interest. There will be various social functions. Full details will be announced later, but members of the Architectural Association wishing to join the excursion are requested to send in their names to the secretary immediately, as the number of the party will of necessity be limited. The cost will be about £15, but this amount will be settled definitely in due course.

McKim, Mead and White—A History.

In 1872 Charles Follen McKim entered upon the practice of architecture in New York City. He had been a student at Harvard, had studied at the *Ecole des Beaux Arts* and had spent two years in the office of Gambrell and Richardson. In 1878 McKim formed a partnership with William Rutherford Mead and Wm. B. Bigelow, the latter retiring from the firm during the following year.

Mead had been graduated from Amherst in 1867, had spent several years in Russell Sturgis' office, had studied a year in Florence at the *Accademia delle Belle Arti*, and had travelled extensively.

In 1879 Stanford White, a New York University man, who, too, had been in Gambrell and Richardson's office at the same time as McKim, after an extensive trip through Europe, joined the others, and the firm of McKim, Mead and White came into being.

From the very beginning of this partnership the work of the firm revealed a quality of architectural design different from and far superior to that which then prevailed, and in due time the firm became noted among the foremost of the architects of the day, taking rank beside a limited number of others whose work showed a high degree of talent, and who had already been in practice for some time.

It must not be thought, however, that recognition came suddenly. In the beginning the firm experienced difficulties and discouragements similar to, but even greater than, those that exist at the present time. But with minds ever set on highest principles of service and art, recognition was bound to come. When once it commenced it grew steadily until, throughout the art world, both here and abroad, McKim, Mead and White became famous, and the buildings designed by them were admired and publicly praised for their architectural beauty. They were hailed not only as great artists but also as pioneers. As building after building was erected, the public became better educated in architecture and evinced a growing desire for beautiful edifices.

Were appreciation of Charles F. McKim, William Rutherford Mead and Stanford White to end with the expression of admiration of their buildings, and praise of their successful blazing of the trail leading to the development of popular taste, their fame would still be secure; but they were more than great designers and public educators. Their early experiences; their love for the beautiful; their passion for good architecture; all caused them to look far into the future even at the time that they were at the pinnacle of success. Those who were intimately connected with them at this time fully know to what extent they did look forward and with what devotion they laid the foundation for the future of the art of architecture in this country. Those whose good fortune it was to be so connected, realise that these men were always teaching, helping and encouraging all who were in their office in order that, when they should go forth as practitioners, they might uphold the standards of the profession as these standards should be upheld.

By this attitude toward art, public and student, the firm became more than a mere office. It became an institution, just as truly as though "College" or "University" had been appended to the firm name.

But there is an additional proof of the truth of the assertion that the firm, McKim, Mead & White was, in character, an institution, and that its members were cognizant of the fact. It is found in their determination to perpetuate the name and continue the activities that had brought this name into such high repute. Thus, at the height of their attainments, they commenced to consider who should, in the future, be their successors. These men must have the same lofty aims and high business principles that they themselves had. They must be men of proven ability.

It was but natural that the selections should be the very men who, in increasing measure, year by year, had contributed a vital influence to the work of the office. As a matter of fact, the work of the men later to be selected had already blended completely with that of the others. Internal changes had taken place without the slightest jar, transition having been so gradual.

When, however, announcement was made of the additions to the personnel of the firm, the world of art was interested. This interest partook of various forms. With these we need not now be concerned. It is sufficient merely to note the fact since time has proven the wisdom of the selections made.

On January 1, 1906, William Mitchell Kendall, Burt Leslie Fenner and William Symmes Richardson were made partners, followed by Teunis J. Van der Bent and later by Lawrence Grant White.

Kendall had been graduated from Harvard in 1876, had travelled abroad and been connected with the firm since 1882. His intimacy with the original partners and the complete artistic harmony in which he and they had worked together for so many

years; the design knowledge which Kendall had contributed during the firm's formative period, and after; these and other assets made it as logical for him to become a partner as it is for brother to join brother.

Fenner had been a student at the University of Rochester and the Massachusetts Institute of Technology from 1887 to 1891, and had entered the office in the fall of 1891. Fenner's father and Mead had been classmates and close friends at Amherst. What, then, more natural than that Fenner, in the pursuit of his profession, should enter the office of McKim, Mead and White? What more natural than that Mead should take a paternal interest in him and that he should impart to him knowledge which had contributed so markedly to the success of the firm; that under McKim and White, Fenner should develop further knowledge of design already gained by his studies at Technology? The younger man soon proved his ability to shoulder the burden of labour of which the older one gradually divested himself.

Richardson had come from practice in San Francisco and had been in the office since 1895, during which period he had gained the confidence of White, who, more and more, entrusted him with important work and continually counselled with him on matters of design. How natural, therefore, that he, too, should become a member of the enlarged firm.

Van der Bent had been graduated from the University of Delft, Holland, in 1885 as an architect-engineer, and had entered the office in 1887. During the time he had been so connected he had contributed great engineering skill. Not alone this; his knowledge of general construction, of planning, of superintending and of designing as well, made him a valued co-worker and a very great asset to the firm at the time of its expansion.

Lawrence Grant White, Stanford White's son, by his very inheritance, was cast for architecture. Under the guidance of his father, even in his early youth, his learning was unmistakably toward that profession. Graduated from Harvard in 1907, he completed the *Ecole des Beaux Arts* course, and in 1914 entered the office and was made a member of the firm in 1920.

While much of the work done before the expansion of the firm might be properly credited, at least in part, to these men, the work for which Mr. Mead and they are entirely responsible dates from 1909, when McKim died, White's death ante-dating McKim's by three years.

For several years prior to 1919, Mr. Mead had been gradually transferring his labours to his partners. He had, during that period, as before, been the steady influence. At the end of 1919 he retired from the firm, still maintaining, however, his interest as consultant and adviser.

And so to-day the firm of McKim, Mead and White is composed of William Mitchell Kendall, Burt Leslie Fenner, William Symmes Richardson, Teunis J. Van der Bent and Lawrence Grant White, with Mr. Mead as consultant.

The first noteworthy attainments of the new firm were the Municipal Building at Park Row and Chambers Street and the United States Post Office opposite the Pennsylvania Terminal, both won in competition. The Terminal itself had been a subject of preliminary study during the life of both McKim and White. The construction contract was awarded in 1906 and the building was erected under the supervision of the expanded firm. Thus in a comparatively short time the firm showed unmistakably its capability of perpetuating the great name as well as the fame of the firm as originally constituted; then and later proving the wisdom of the original members in their choice of men that were to succeed them.

And what of subsequent work? When we recall some of the earlier work, we are impressed by the classic tendency that pervades most of the designs. So are we impressed when we study an equal number of the best buildings designed after 1909.

Comparison between the two periods reveals little to allow of differentiation. The same scholarly knowledge is evident. The same dignity of design is appreciable. The same conception of scale and proportion is discernible. And we note the same refinement of detail. Instinctively it occurs to one's mind that the same artistic impulses are at work now as at the previous period; that the same spirit of art still exists. No break in continuity is evident between what was and what is. McKim, Mead and White still lives.

Classic influences have always prevailed in the work of this firm. Each example of it is a noteworthy expression of these influences, yet if we study some of the individual buildings designed in other styles we are impressed by the same scholarly understanding which is shown here, also. The Redmond houses are an example. The problem of designing a residence in the French style of Henry II, at the corner of two streets in a great city, is fraught with many difficulties. These difficulties are not always apparent after designing has been completed. In fact

the finished building should not show them at all. Nor does it in the case in question. (How many, for example, have observed the unequal spacing of windows?)

The net result is an edifice simple in character, well proportioned and dignified, attesting in every part studious care supported by full understanding of the *motifs* of the period of Henry II.

Another case is that of the Newbold house. Compare this house with any of similar style (and there are many in the city), and we cannot help noting how well the natural difficulties have been overcome, or if few are recognised in the completed work it is because the result is so eminently satisfactory.

The same general remarks are applicable to the Pyne house, which is a noteworthy building among Georgian residences of modern erection.

The difficulties of satisfactory solution of the problems involved in the planning of the Municipal Building are best known to those architects who competed for the work.

A comparatively small plot of irregular shape on which was to be erected a very high office building, whose rooms required proper lighting; a building whose principal storey would allow of uninterrupted passage of the traffic of Chambers Street, as well as access to subways; a towering building without cellar for the numerous necessary mechanical contrivances of an office building—these and other requirements faced the competitors.

That all these problems are satisfactorily solved is evident, and we have a building of 580 feet to the top of the figure, of superbly monumental character and classic beauty, every part of which attests the architectural knowledge of its designers.

—[From an article by Lionel Moses in the "American Architect."]

Housing in Scotland.

The third annual report of the Scottish Board of Health, that for the year 1921, has been issued in the form of a Blue Book. The matters coming within the jurisdiction of the Board include public health, housing and town planning, national health insurance, poor law, local government, and pensions. The following is a summary of the report under the heading of "Housing and Town Planning":—

The outstanding decision during the year was that reluctantly come to by the Government in July to the effect that, meantime, owing to the excessive cost of building, no further tenders for houses were to be approved, and that the number of houses to be built by Local Authorities and public utility societies under the State-assisted scheme in Scotland was to be limited for the time being to the number already built, building, or for which tenders had been approved. This decision was intimated by us to local authorities in a circular dated August 15, 1921. The Government's decision was apparently far from welcome to the local authorities, judging by the numerous representations received by us from local authorities urging that they should be allowed to proceed with the erection of more houses. The number of houses required according to the schemes as approved by us is 115,057, whereas the number of houses for which tenders had been approved up to the end of December, 1921, was only 21,344. It would seem therefore that, even making allowance for the houses being provided under the private building subsidy scheme, the needs of housing in Scotland will be met only to the extent of about one-fourth. While comparatively few additional tenders have been approved, considerable progress has been made with the actual construction and completion of houses already contracted for by local authorities and public utility societies. Whereas at the end of 1920 only 927 houses had been completed and 7,024 were under construction, these figures have increased to 5,287 and 11,849 respectively as at the end of 1921.

At the end of 1920 the total number of skilled operatives and labourers engaged upon housing schemes in Scotland was only 6,357. At the end of December, 1921, there were 14,318 men employed on Scottish housing schemes.

During the year the erection of houses by private builders under the Housing (Financial Assistance to Builders) Scheme, 1920, made progress, but not to the extent hoped for by us. Certificates of approval of plans, etc., for the erection of 1,575 houses were granted by local authorities during the year out of a total of 3,210 houses for which certificates had been granted since the announcement of the scheme in February, 1920. The total commitment represented by the above 3,188 houses amounts to £775,620, of which £294,890 has already been paid in respect of the 1,221 houses completed.

Mr. J. H. Williams, architect, of 15 Foregate Street, Worcester, has taken Mr. H. Percy Smith, M.S.A., into partnership, and they will continue to practise as architects at 15 Foregate Street.

The King Edward Memorial Park, Shadwell.

We give below some data in connection with the very useful work which the L.C.C. has carried out in East London.

The Memorial Committee raised a sum of nearly £100,000, of which £74,000 was spent on acquiring property, £2,000 was retained for providing a memorial of his late Majesty in the park, and £11,500 was spent on the equestrian statue, with its pedestal and foundations, in Waterloo Place by Sir Bertram Mackennal. The balance of about £10,000, partly in War Stock and partly in cash, was handed over to the Council in October, 1921. As stated, the City Corporation in effect contributed some £70,000, this being the difference between the value (£140,000) of the market and the price (£70,000) accepted from the Memorial Committee. The Council's principal contributions are estimated as follows: £4,000, being the value of land, surplus from the construction of Rotherhithe Tunnel, added to the park; £4,500 for the purchase of additional property; £2,000 for repairs to the river wall; £6,000 in respect of retaining walls with gates and railings in High Street, Shadwell, Glamis Road, etc.; £3,100, being the cost of filling up the re-entrant on the river front; £7,500, being the cost of the arrangement with the Port of London Authority; £21,250, being the cost of clearing the site and of laying out the park; and £2,000 for legal expenses, stamp duty, and incidentals. Towards these expenses the Memorial Committee have contributed about £10,000, £2,300 is being credited to the parks account in respect of land taken for street widenings, £10,000 has been received from Messrs. Charrington, Dale & Co., £8,750 is being transferred from the main drainage account in respect of the use of land and buildings in connection with the laying of the north-east storm relief sewer, and £1,300 was received from other sources. After allowing for these receipts and transfers, and for the amounts received for old materials, and taking into account the sum of £14,000 to be allowed in respect of the capitalisation of the Council's liability to the City Corporation for rent in respect of part of the site, the Council's net expenditure on capital account will not be large. It will, however, have to meet a charge, estimated at £1,600 a year, in respect of maintenance.

The park has been laid out to the design and under the superintendence of the Chief Officer of the Parks Department, Brigadier-General P. Maud, C.M.G., C.B.E., who has furnished the following account of the work:—

The site presented special difficulties in the laying-out, partly because of the steep slope from the High Street frontage, and partly from the fact that it was covered with foundations of buildings, many of them of solid concrete. The difficulty of slope was overcome by forming two terraces for the greater part of the northern boundary, interrupted at the north-east corner in order to provide a sloping path, giving access for perambulators.

The upper terrace, which is paved with stone throughout, has been conceived on bold lines. It has an herbaceous border with a background of evergreen and deciduous shrubs for its entire length. In the centre of the eastern part where the terrace broadens out is placed the memorial to King Edward by Sir Bertram Mackennal. The greater width of the stone paving at this section permits of the placing of specimen trees and seats, from which commanding views of the river with its shipping are obtained.

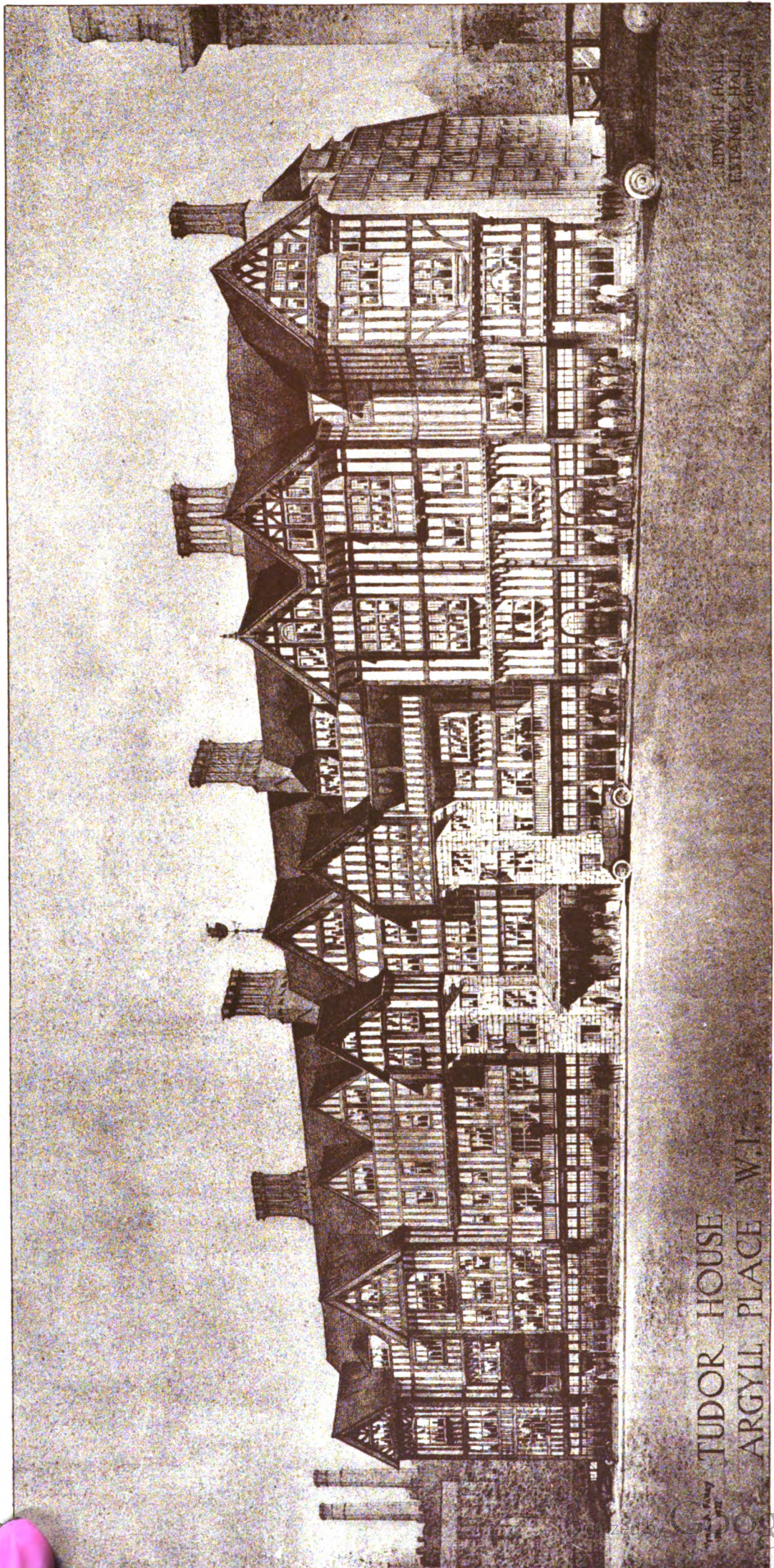
On the lower terrace is a pleached lime walk, and borders of shrubs and flowers. Two sections of the flower border will be confined to red and blue subjects respectively, following the lines of the white garden at the Rookery, Streatham, which has proved very popular with the public. On the Glamis Road frontage a large tar-paved playground has been formed, fitted with gymnastic apparatus at one end, and providing space for two football pitches. Along the eastern boundary a similar playground for girls will be laid out, containing swings and other apparatus, and a sand-pit. The yard and service buildings will be in the north-eastern corner.

The central area comprises two large grass playing-fields, a bowling-green, two hard tennis courts with pavilion, and an enclosure for women and children adjoining a shallow paddling pond, fed from a settling tank supplemented by a regular water supply.

The river front provides space for a gravelled promenade with seats and a shelter. At the eastern end between the terrace and the girls' gymnasium there will be a band platform and enclosure.

The cost of adapting the whole area is estimated at £21,250.

Messrs. Rippers, Limited, joinery manufacturers, of Castle Hedingham, Essex, are exhibiting a full range of hospital doors at the Royal Sanitary Institute Exhibition at Bournemouth, which is being held in the Drill Hall, Holdenhurst Road, from July 25-29 inclusive. Architects, physicians, and all interested in modern sanitation are cordially invited to visit Stand No. 30.



TUDOR HOUSE
ARGYLL PLACE W.1.

TUDOR HOUSE, ARGYLL PLACE. W.1.
EDWIN T. & E. STANLEY HALL, ARCHITECTS.

EDWIN T. HALL
E. STANLEY HALL
ARCHITECTS

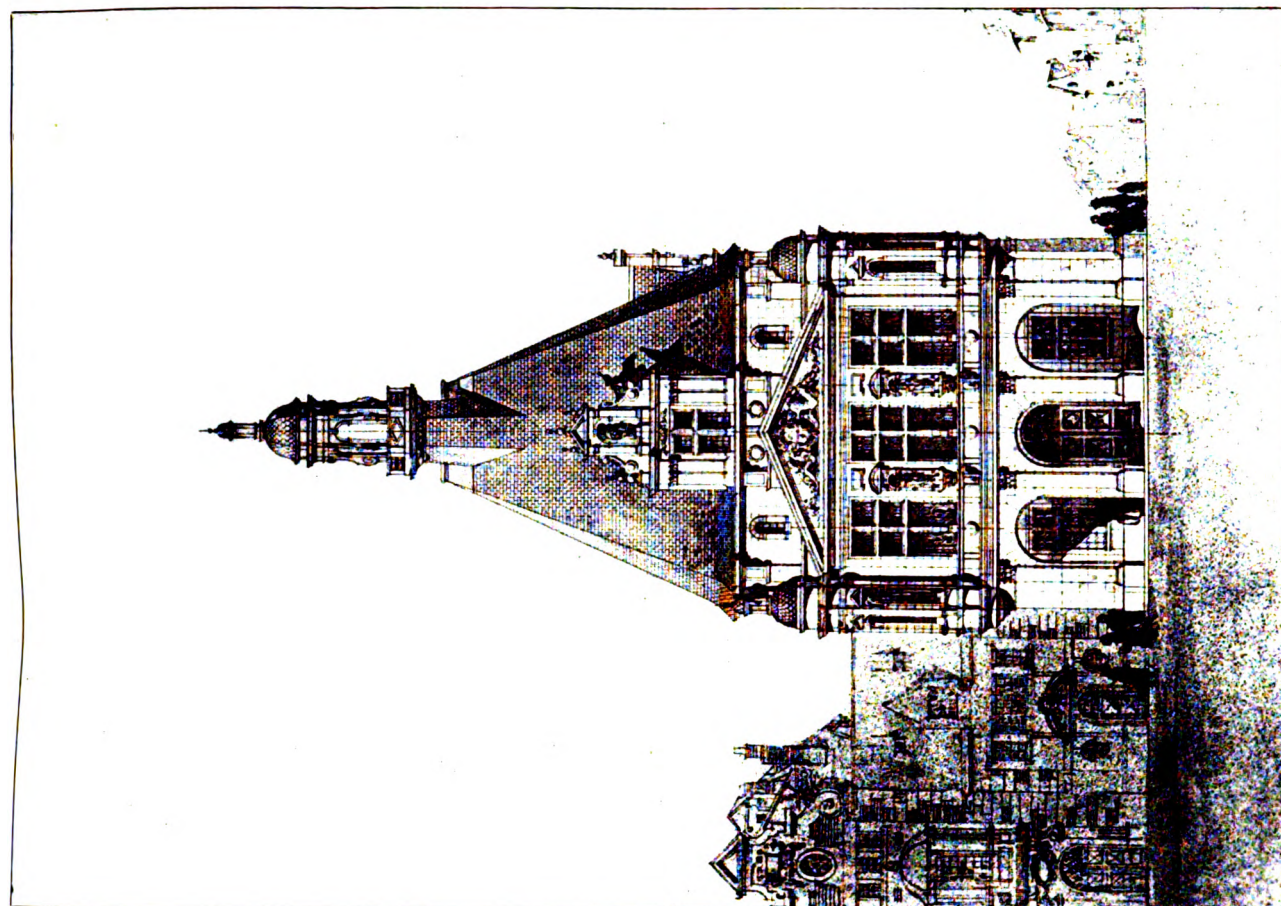
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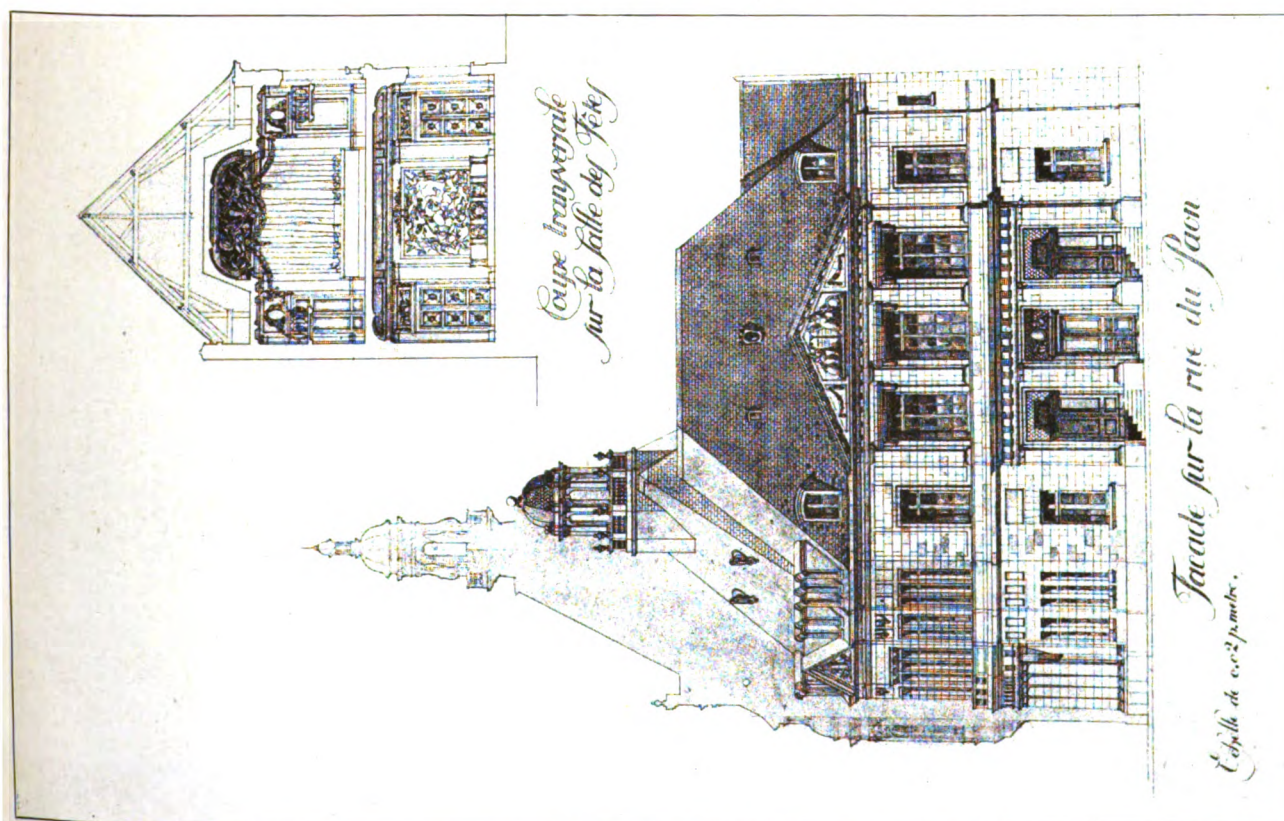
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HOTEL DE VILLE, PÉRONNE

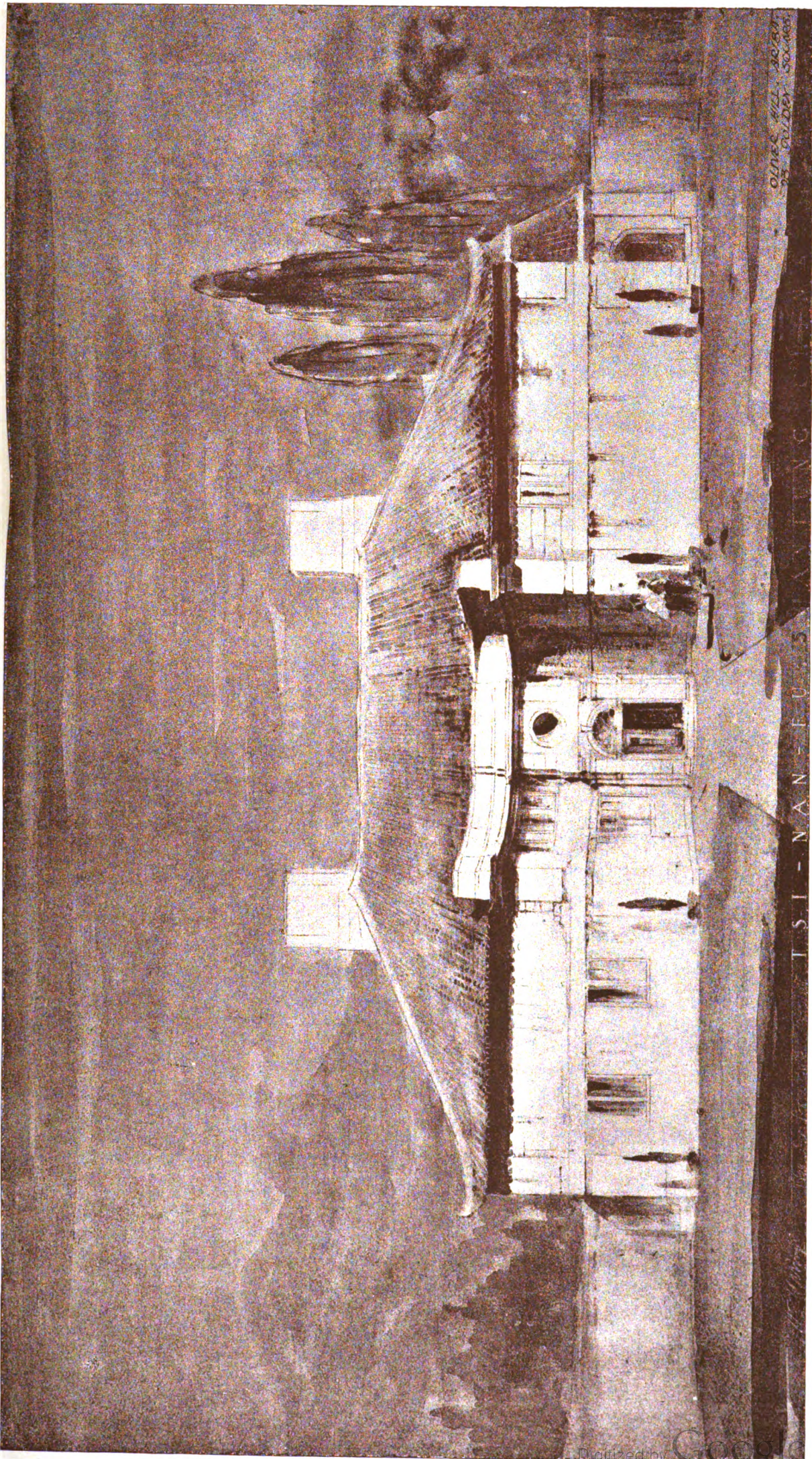
JACQUES DEBAT-PONSAN, S.A.D.G., ARCHITECTE DU GOUVERNEMENT.



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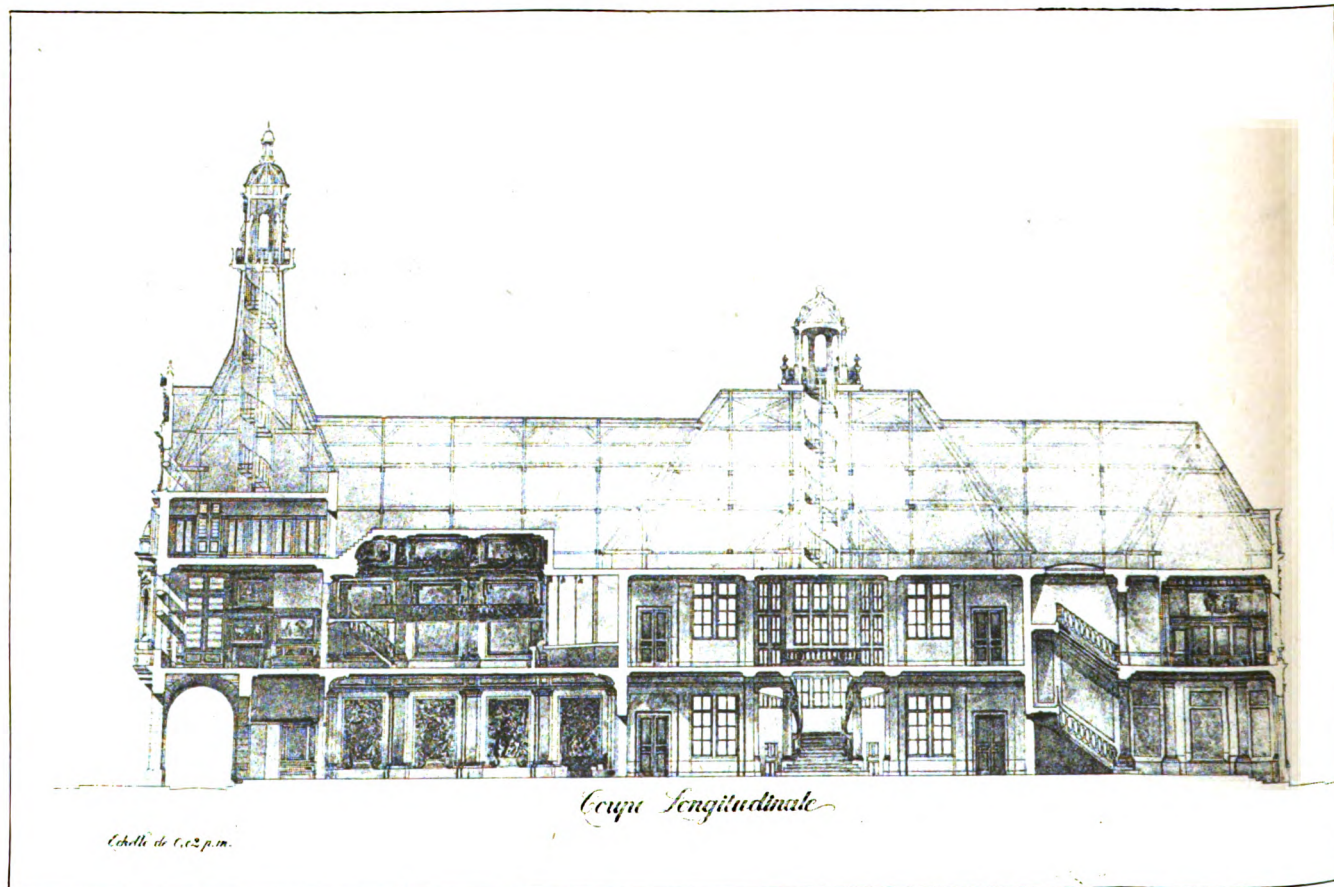
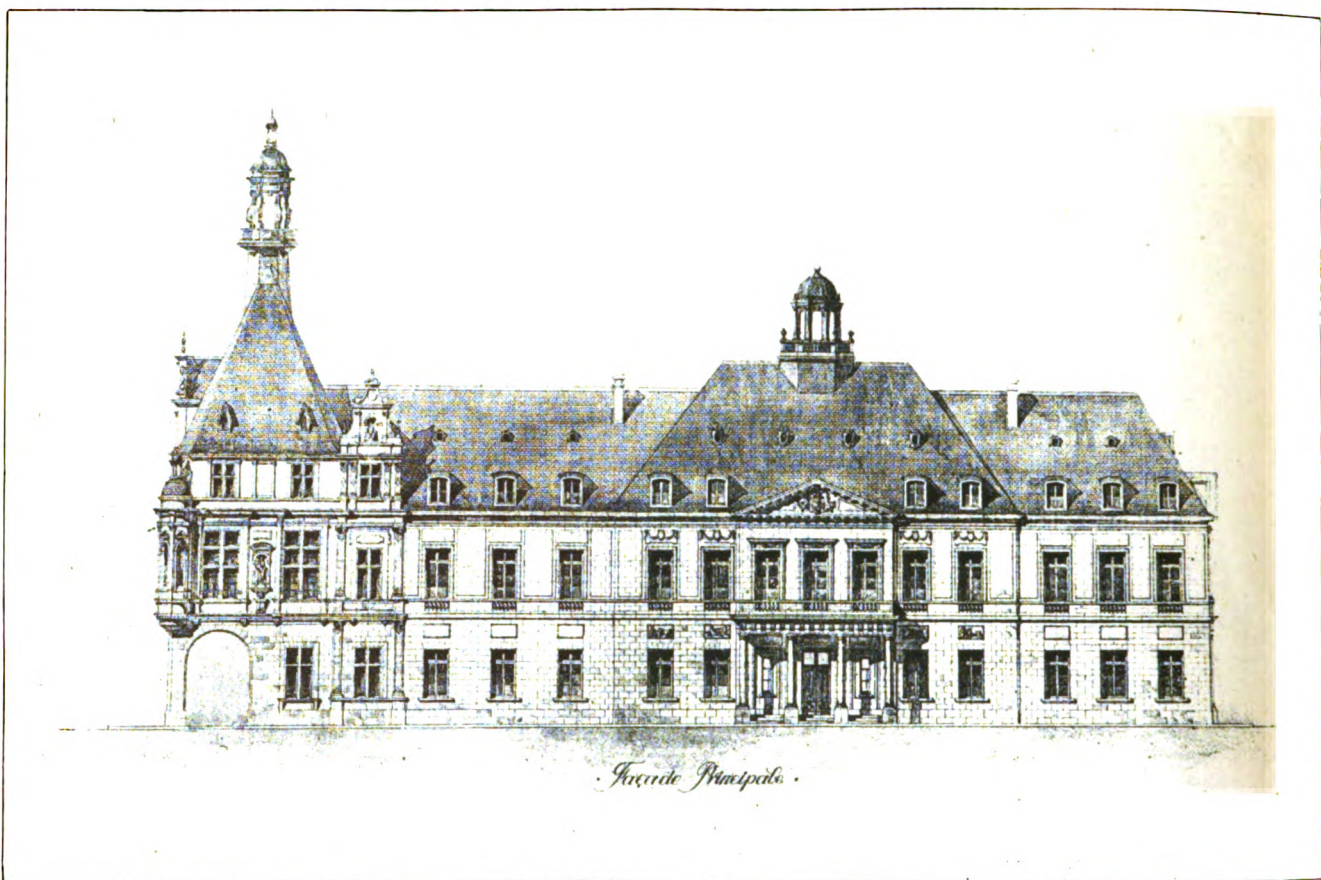
HOTEL DE VILLE, PÉRONNE
JACQUES DEBAT-PONSAN, S.A.D.G. ARCHITECTE DU GOUVERNEMENT.



ENTRANCE TO HOUSE AT TSI-NAN-FU, SHANTUNG, CHINA.
OLIVER HILL, ARCHITECT.

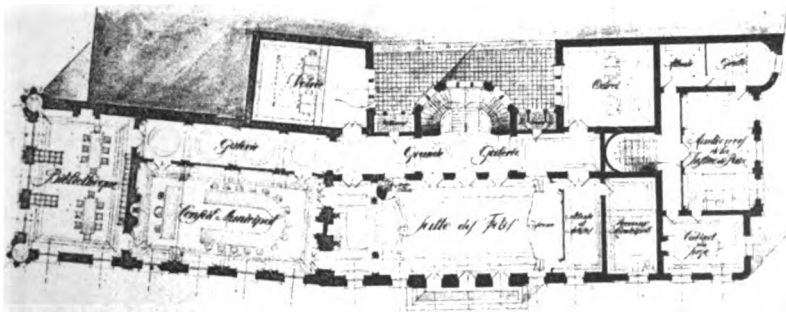
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OLIVER HILL 30/10/22
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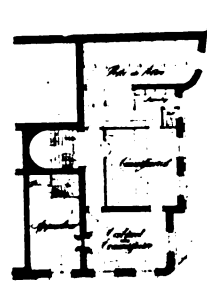


Vues

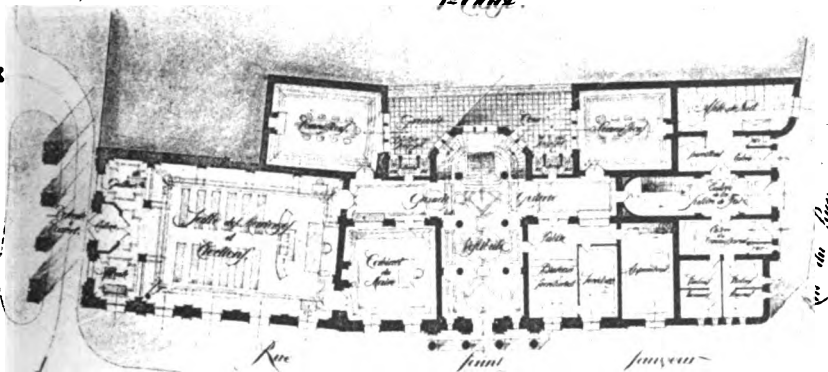
Plans.



1^{er} Etage.

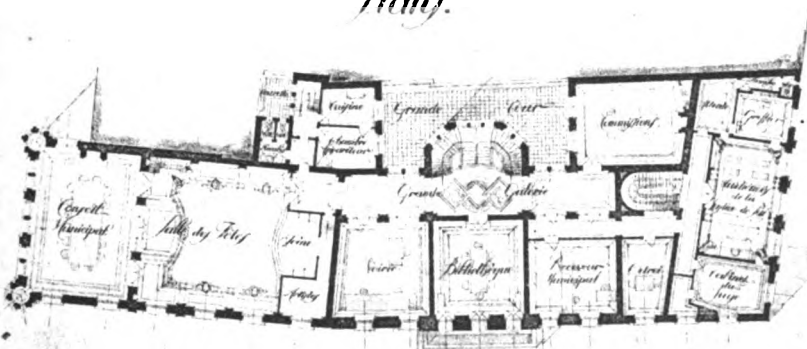


2^{ème} Etage.



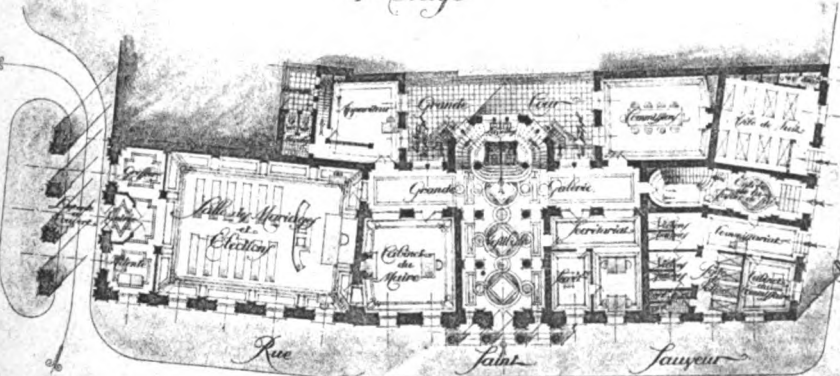
3^{ème} Etage.

Plans.



1^{er} Etage

Grande Place



Rez-de-Chaussée

Echelle de 0,5 et p. mètre

Sic Transit Gloria Mundi, or the History of St. Lawrence, Whitchurch.

The nineteenth-century restorer has often been a byword, but there are few places where he has done less harm than at St. Lawrence, Whitchurch, that tiny church, otherwise Stanmore Parva, as an epitaph of 1812 has it, near Edgware, whose interest, artistic and literary, is unique in England. The coming opening-up of the district by the new Great Central and Metropolitan Joint Railways will probably attract many to the place who know little of its history, and do not realise that in this little building of plain red brick with stone dressings we have all that survives of Timon's Villa, so vividly satirised by Pope and so well remembered by posterity for many biting lines. The Dean "who never mentions hell to ears polite," "all the pride of prayer," "bring all paradise before your eye"—the very words are part of the language; and as for Verrio and Laguerre, no one has heard their names without remembering their painted ceilings and their sprawling saints as Pope depicted them.

The body of the church then was rebuilt, all but the fifteenth-century tower, by the magnificent Timon, James Brydges, Duke of Chandos, as an appendage to his equally magnificent seat of Canons, which was not only dismantled, but destroyed three years after his death in 1744. Lovers of music all the world over know that for three years Handel was organist there, and wrote his famous Chandos anthems, which, we may hope, Pope was not satirising when he wrote of the services at Canons:

"Light quirks of music, broken and uneven,
Make the soul dance upon a jig to heaven."

The outside, then, is not remarkable, except that the body of the church is a notably good example of a period of ecclesiastical architecture rare outside the City; it is the interior which is so astonishing. The walls are adorned with chiaroscuro figures of Virtues and Apostles in niches, placed to imitate sculpture; the plain curved ceiling shows excellently painted scenes from the Old and New Testaments; the east end, where the building broadens somewhat, needs a more particular description. The altar, under its Grinling Gibbons screen, but sadly spoilt by the poor modern chancel rails, is adorned to right and left with panels representing the Adoration of the Kings and a Pietà; it is subordinated to an organ, Handel's organ, which is flanked by large and very beautiful frescoes, ceiling high, representing the Old and New Dispensations, Moses receiving the Law from angels in clouds and storm, Christ teaching the multitudes upon a serene and sunny day, which harmonises well with the spirit of the Sermon on the Mount. The chancel ceiling is enriched by a really glowing and harmonious vision of Paradise, like the last by Laguerre, the preservation of which is excellent. The west end is occupied by a species of gallery which is, in fact, the frescoed ducal pew, and which was so built that the organ and the glorious services over which Handel presided should be heard to the best effect.

To the north is an uninteresting vestry, and from its side two steps lead up into a mausoleum which preaches, more vividly than the vanished mansion even, the vanity of human wishes. Hundreds of people flock to see the perhaps mythical and certainly modern tomb of the Harmonious Blacksmith in the churchyard outside, as often as not repeating "The Village Blacksmith," and pulled up by the discovery that the tree is not a spreading chestnut tree at all, but a copper beech, "so that it's all wrong"; this is the literal and painful truth, and Longfellow's pernicious lines are one of the disservices America has done us. But this mausoleum of the founder of Canons, the great Duke of Chandos, with its iron gate surmounted by his coronet and banner—no one now cares for him or it: not even the churchwardens, one feels tempted to say, when one regards the lamentable state of the frescoed figures round the walls of this vast and melancholy chapel. Three tombs are here, the only three put up during the short-lived greatness of Canons. One is a colossal marble structure, finely architectural, representing the Duke

himself and his two wives—one Mary Lake, who brought the estate of Canons as her dowry, and died in 1712; one the sonorously named Cassandra Willoughby, who died in 1735. The ladies, veiled and in loose draperies, kneel to right and left; the splendid Duke, in periwig and full armour, stands in the middle, the effect being painfully suggestive of a statue of a saint between two votaries. The inscriptions are, however, touchingly simple and, for the period, singularly religious in tone.

Two other monuments stand in this great lonely place, built when the extinction of Canons seemed remote indeed, and now painfully empty—that of the Duke's daughter-in-law, Lady Carnarvon, a poorly composed sarcophagus set in a classic niche against the background of a dark marble pyramid, and that of her daughter-in-law Margaret (ob. 1768), a large classic sarcophagus of white marble with delicately carved panels adorned with olive branches in relief. The mouldings are pure in style, and the whole, though unsigned, recalls the Hellenising work of the brothers Adam and "Athenian" Stuart.

As we return from the mausoleum to the chancel, we notice at the west end of the church that small gallery supported on pillars, ordinary enough at first sight, and already referred to as the Duke's pew, placed there to secure the best acoustic effects from the organ; the coved ceiling is enriched with a fine reproduction of Raphael's Transfiguration, and the rich upholstery still there recalls the cushions which invited, said Pope spitefully, to rest, while the "Swiss guards," old Chelsea pensioners, attended the great Duke as a bodyguard.

Ex pede Herculem is a true saying; and to judge from this little church, built as a ducal chapel, the splendours of Canons are among the losses which, like Stowe before 1921, would have preserved for us a past civilisation, and which have the further interest of association with the immortal names of Pope and Handel, and the less imperishable memories of the artists and sculptors who worked for the Duke whose labours were so early lost.

Reduction of Railway Charges.

We give below the terms of agreement between the Federation of British Industries and the English and Welsh Railway Companies.

As a result of meetings held by the General Managers of the English and Welsh railway companies with representatives of trade and agriculture, organised by the Federation of British Industries, the following terms of settlement have been arranged.

1. A general reduction on merchandise traffic by goods train, so that the rates and charges for that traffic will be 75 per cent. above the rates in operation on January 14 1920, in place of 100 per cent. above such rates, this to apply both to class rates, and exceptional rates. All concessions by which any rate charge, etc., has already been reduced to a figure less than 75 per cent. above the corresponding rate on January 14 1920 will remain unaffected by this settlement.
2. Flat rate increases are to be reduced as follows:—1s. to 6d. 9d. to 4d., 6d. to 4d., the 3d. flat rate being unaffected.
3. The rate for smalls to be reduced from 150 per cent. to 100 per cent. above the rates in force on January 14 1920.
4. This settlement is not to affect the question of merchandise carried by passenger train, nor any present or future negotiations relating thereto.
5. The reductions are to come into force on August 1 next, and it is understood that neither the Federation nor the railway companies will apply or be parties to any application for a general alteration to come into operation prior to July 31 1923 of the rates and charges now agreed. This paragraph is to leave the rights of both parties entirely unaffected when discussing the quantum of the rates to be in operation after the appointed day.

This agreement was confirmed by the Executive Committee of the Federation at a meeting on July 12 1922.

It is interesting to note that the ideas to be developed at the Woman's Exhibition at Olympia this week by Mr. R. G. Lovell on the influence of colour originated with the Society of Architects nine years ago, when Mr. Lovell dealt with the subject in a manner which resulted in a widespread publicity being given to it. Art students and architects, no less than women, will be interested in the results which Mr. Lovell has achieved after further experiment and research.

Street Charges and Town Planning.

At the conference of the Institution of Municipal and County Engineers, recently held in Cardiff, one of the most important addresses given was that by Mr. J. G. Gibbon, C.B.E. (Assistant Secretary, Ministry of Health), which dealt with the subject of town planning as it particularly concerned his audience. From it we give the following extracts :—

The engineer, as we know him to-day, is quite a recent product. He is really not much older, or as old, as the motor-car. He is fresh from the workshops of necessity. His tasks are mostly new. They are forced out by the stress of compelling circumstances. The very latest of these developments, but not the final one, is town planning, and the time is fast approaching when the engineer of any large urban district will be required as a matter of course to be familiar with town planning, and to be the town planner.

The question of street charges is of crucial importance in the revival of house building, and it is imperative that, whatever might happen in regard to the State scheme of housing, the utmost encouragement should be given to private enterprise in the provision of houses. It has been suggested in some quarters that local authorities should undertake all the charges of street making. While incurable optimism is, on the whole, not a bad disease, it is carrying incurable optimism to the *n*th degree to think that heavily burdened local authorities are likely to take on this further burden. The complaints which have been made are five. In the first place there is the complaint that too high a standard is demanded by the local authority, and by the local authority they mean the local engineer and surveyor. Another point put forward is that a standard is sometimes demanded which is not the right kind of construction for the particular street; that the street is really a through street, and that the high standard is required, not for local necessities at all, but for through traffic; and that, whereas the frontager is required to pay only for the width which is required for local necessities, so far as the standard of construction is concerned, he is required to pay, so it is alleged, for as the standard which is demanded for through traffic. The accusation is that the frontager has been asked to subsidise through traffic and, in particular, motor traffic. Then the third complaint is that in many cases local authorities will not indicate to house builders what their standards are, with the result that the man who is developing an estate has to develop his estate in the dark, laying himself open to liabilities of which he has no exact knowledge. The fourth complaint is that, whatever care a developer may take in the making of an initial street, these hidebound local authorities—because we are all hidebound to them—will never give him any credit for it, and they always require that street to be made different and anew, right from the beginning. The fifth suggestion, and the last, is that the most hopeful way of approach to the present confusion as to streets and street charge is that there shall be greater elasticity—in other words, instead of dealing with each street as a unit in itself, and requiring for that street a certain standard width and a certain standard construction, to get an estate development. If we can get the owners to agree and then allow according to local necessities, making quite sure that we have a sufficient number of through streets, and making quite sure that these streets for which we make special concessions are not made through streets, we can make concessions as regards width and construction while they will not pay a penny, but the local authority will gain a great public advantage. The problem is a difficult one, but we must do all we can to solve it. The Ministry of Health has started, in conjunction with its own housing department and with the co-operation of the Ministry of Transport, an inquiry into the whole problem.

The main argument for town planning is economy. Hundreds of thousands—nay, you can reckon it in millions—could easily be saved if we had the town planning instinct with foresight. We all have to sacrifice at the altar of economy at present, but it is no mere parsimony which is

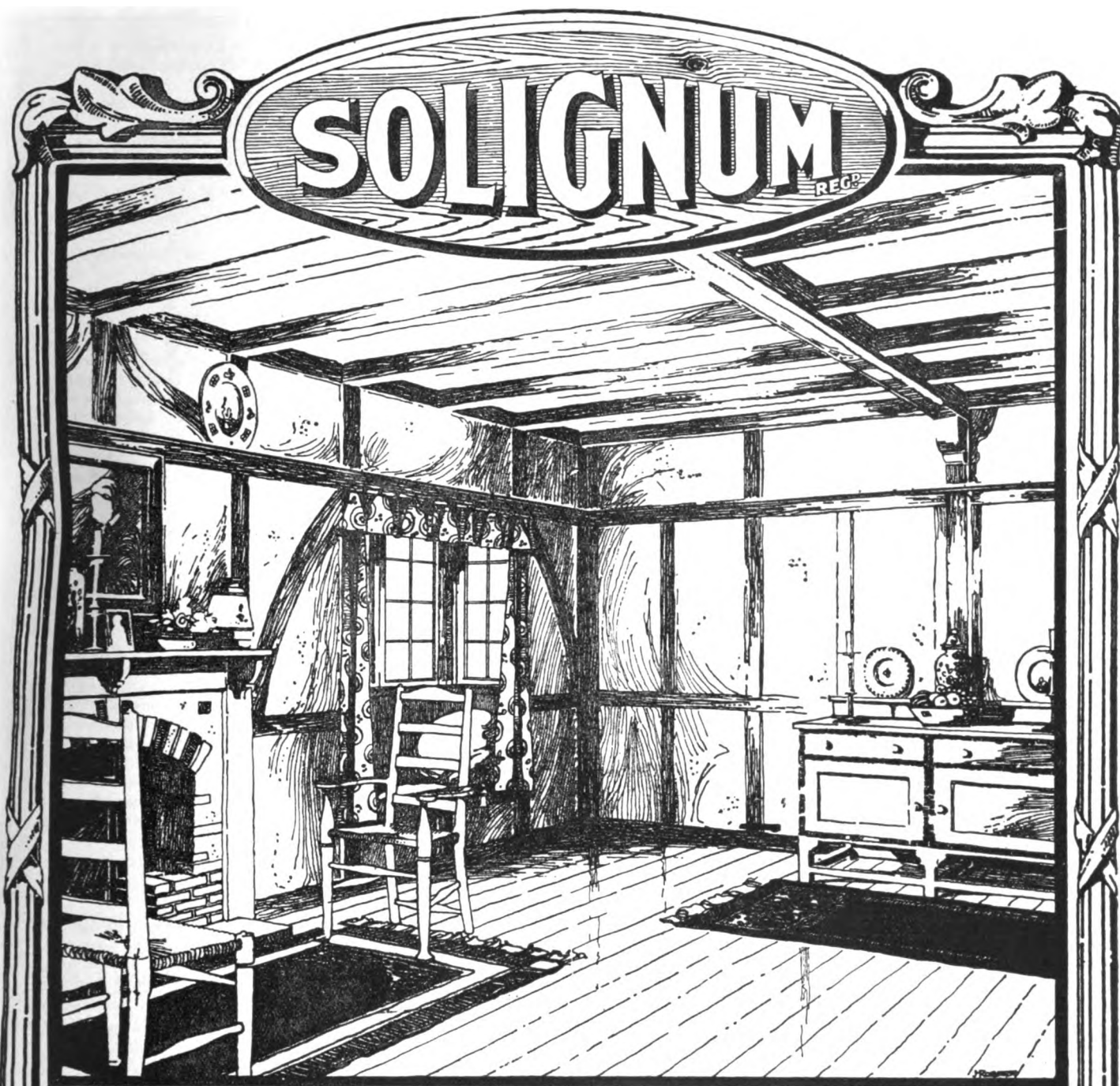
going to drag this country out of its present depression and land us in prosperity. We require a positive economy, and nothing tends more towards success for that policy in local affairs than town planning. It is imperative that town planners should bring to the notice of business men what town planning means to them. Here we can learn a lesson from the United States. Business men there are taking up town planning with zest and zeal, not out of sentiment, but because they know that town planning is good business. The root of their conviction is money, not sentiment. Another phase of the same question is that we have to bear in mind that a town plan is not simply a town planning expert's plan, not simply a municipal engineer's plan, but the community's plan; that, if well done, is going to proceed long after we have had our day; and it is imperative in the preparation of our plans we should do the utmost to consult the business interests and all other interests concerned in the locality. The Ministry of Health is endeavouring to simplify matters. We don't want to cumber town planning proposals with a mass of details, but to keep them as simple as possible. We hope very shortly to issue a set of model clauses which will relieve officials of local authorities from the burden of having to draft from that strange language—legalese—all those things they want to compass. Even with these measures we fully recognise that in some cases much time must elapse before proposals are ripe for submission and approval, though not quite so much time as occurs in some cases.

One of the principal criticisms raised against town planning is that it hinders development, and it sterilises the land. We don't want that to happen; and it must not happen, whatever be the price we have to pay. We must on no account hinder development. The course we propose is to issue, almost immediately, an interim development order, under which powers will be given to local authorities to allow development to proceed in anticipation of the town planning scheme, and it will be open to the local authority to impose such conditions as are reasonable, in virtue of the forthcoming scheme. We are anxious that that should work well. We have provided that there shall be an appeal to the Ministry from refusal of a local authority to allow development, or from the requirements which are being imposed by the local authority, but we do not want appeals. We want development to proceed. These two things can be accomplished by that most praised, but not always honoured, sweet reasonableness.

Use of Canadian Timber in Government Buildings.

The Imperial Institute Advisory Committee on Timbers is conducting an inquiry into the possibility of extending the use in Great Britain of the timbers produced in the various countries of the Overseas Empire. A number of reports have been furnished to the Governments concerned, some of which have been published from time to time in the Bulletin of the Imperial Institute. The current number contains reports on certain timbers from British Columbia and the Eastern Provinces of Canada. The attention of H.M. Office of Works was called by the committee to the value of British Columbia Douglas fir, spruce and hemlock for constructional purposes, and it is now reported that as a result of special strength tests and joinery trials these woods are now included in their official specifications for Government buildings as alternatives to European woods.

The Eastern Canadian timbers dealt with comprise softwoods such as spruce, red pine, and yellow or white pine, and hardwoods, including white birch, rock maple, beech and white elm. The committee consider that the technical qualities of Eastern Canadian timbers are such as to warrant a far larger use of the woods in this country than obtains at present. In particular, spruce and red pine should find a good market, since they form admirable substitutes for Baltic white and red deal respectively. Yellow or white pine is already well known, but should also be more extensively used. H.M. Office of Works will permit the use of these Eastern Canadian timbers by contractors for Government buildings if the woods conform to the official standards of quality. It is also understood that the three softwoods mentioned have been accepted by the War Office as alternatives to European softwoods.



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MAJOR & COMPANY LTD

New Catalogues.

It is no small praise to say that the latest catalogue, if such it might be called, issued by Chubb and Son's Lock and Safe Co., Ltd., is worthy of a firm which has been so eminent in its own line for more than a century and now enjoys the distinction of being lock and safe makers by special appointment to King George V. Whether for its personal story, its technical matter, or its general illustrations, these forty pages are of a very genuine interest and are as excellently displayed as they are well written. The history of the company begins in 1817 in a ships' outfitters and iron-mongers' shop carried on by two brothers, Charles and Jeremiah Chubb, at Portsmouth. In that year the Government, alarmed by a serious robbery at the Portsmouth Dockyard, offered a reward of £100 for a lock which could be opened by no other key than its own. The prize was awarded to the Chubb Detector Lock, which, in consequence, soon acquired an enormous popularity. In a few years the factory had to be moved from Portsea to Wolverhampton, for centuries famous for the skill of its locksmiths, and in which town it has remained ever since in a state of steady expansion. About the same time offices and salerooms were opened first at 57 St. Paul's Churchyard, and since 1877 at 128 Queen Victoria Street, E.C. Further developments in London occurred when a safe factory was built in 1866 in Old Kent Road, S.E. The Chubb family have always been closely identified with the business. Exactly forty years ago the business was purchased from the trustees of the late Mr. John Chubb (son of the founder) and formed into a limited company under the chairmanship of the present Sir George Hayter Chubb, Bt., J.P. Of the present directors five are of the family and three are not—viz., Ald. Sir George W. Truscott, Bart., J.P., Sir Henry Holloway, J.P., and Mr. Harold G. Morrish, M.A. The vital force of the firm remains unabated. Subsidiary companies are now in operation in both South Africa and Australia, a scheme is on foot for the formation of a branch company in India, and similar extensions may be carried out shortly in other countries. An idea of the importance of the business is suggested by a list given at the end of this catalogue of "Some Chubb Security Users"; it includes more than one hundred and fifty banking firms alone. But these forty pages are also something of a text book on the history of the tireless duel between the attacking forces of burglary and fire on the one side and the lock and safe maker in defence on the other—a war in which the House of Chubb has long played so valiant a part. Extremely interesting illustrated accounts are given of safes and safe deposits in the making and on other allied matters.

Cafferata & Co., Newark-upon-Trent, have prepared a booklet (No. 17-24) giving fixing instructions for their plaster slabs, which have been so widely used for non-weight-bearing walls and interior partitions. Cafferata is pure plaster reinforced by selected reeds and ensure "a plaster base for a plaster face." As the proprietors state in the foreword: "The erection of 'Cafferata' partitions, etc., is a procedure so simple that these few practical notes will seem unnecessary to the large number of builders, plasterers and clerks of works who are already familiar with 'Cafferata' partition slab erection. They have been prepared, however, mainly for the help and guidance of the ever-increasing numbers of new users of 'Cafferata' slabs. But all users may consider this handbook well worth keeping handy."

The instructions are simply expressed and are made still clearer by diagrams. Clear type, good paper, and careful printing do credit to the producers.

"Electric Light and Power for Country House and Farm" is the title of a twelve-page booklet sent us by Messrs. Marryat and Place, 28 Hatton Garden, London, E.C. It may be said to be divided, like many other things, into three parts. First comes a cheery, subtle and cleverly illustrated little account of the conversion of a confirmed city lover into a confirmed country dweller through the magic of an M. & P. installation in a friend's house. Then a couple of pages are devoted to the M. & P. "Simple" wiring system together with the various services offered by an installation which range from pumping, or vacuum cleaning to the more obvious uses and luxuries of heating, cooking and lighting. Lastly comes a non-technical description of the Marryat & Place "Simple" Electric Light and Power Sets. As a sort of addendum the final page is descriptive of the M. & P. service, which has won them some of their firmest friends among their earliest clients. And finally comes the company's ample guarantee, which is best left to speak for itself: "We undertake to make good with all reasonable despatch any original defect in workmanship or material which may become evident in any installation of our 'Simple' system of Wiring and Electric Equipment, the defective material, part or parts being returned to our works, carriage paid, for the purpose of repair or replacement."

Forthcoming Events.

Saturday, July 22.—Royal Institute of British Architects. Visit to Greenwich Hospital and the Royal Naval College, Greenwich. Visitors to meet at the tram stop, King William Street, Greenwich, at 3 p.m.

Architectural Association. Visit to Long Crendon Manor, Thame, Oxon. Restorations and additions by Philip Tilden. Train from Paddington 12.28 p.m.

Monday, July 24.—Royal Sanitary Institute. Thirty-third Congress to be held at Bournemouth (July 24-29).

Thursday, July 27.—Architectural Association School of Architecture. Prize Distribution. Address to Students by Sir Reginald Blomfield, R.A. 3 p.m.

Friday, July 28.—London Society. River trip to below Greenwich on s.s. "Royalty." Launch leaves Westminster Pier, 5 p.m.

Saturday, July 29.—Northern Architectural Association Club. Visit to Sinclair's Building and Holy Trinity Church.

London County Council.

SHELTERS OVER THE PUBLIC WAY.

For many years past the London County Council has refused to permit the erection of shelters over the public footpaths, except in the case of theatres, music halls and public halls with seating accommodation for at least 500 persons, hotels accommodating 200 persons, and railway stations. The Building Acts Committee of the Council is now of opinion that the time has arrived when cinematograph halls should be placed on the same footing as theatres. A recommendation to this effect was this week adopted by the Council.

ACOUSTIC PROPERTIES OF THE NEW COUNTY HALL.

Notwithstanding that six eminent authorities are reputed to have been consulted to ensure satisfactory sound distribution in the new Council Chamber, the acoustic conditions leave much to be desired. At the beginning of the Council's meeting the Press representatives present were desperate. Of many speeches it was literally impossible to hear a word. The portico over the dais obstructs the view of a large portion of the Council Chamber, and when members are speaking from the hidden parts it is only possible to guess at their identity. The cardinal mistake from a structural point of view seems to be the presence of the portico, which, other considerations apart, certainly breaks up and confuses the sound waves before they reach the Press Gallery. If the Council ever hopes to have its more important debates satisfactorily reported, the only possible solution would be to give Press representatives a seat on the floor of the Chamber, or in a specially constructed bay near the floor level.

Cornell-Wood-Board.

A marked change has been made in the saleroom of Messrs. Edward Chaloner & Co., Liverpool, by the use of the now well-known American product Cornell-Wood-Board. The accompanying photograph shows how this wood-board lends itself for



panelling, ceiling and many other uses too numerous to mention here, besides being useful for various forms of decoration.

The saleroom colours have been well chosen and the buyers' comfort carefully considered in every way.

Messrs. Edward Chaloner & Co. are the sole agents for Cornell-Wood-Board in the United Kingdom. The users of this product can obtain their supplies from various distributors appointed in their particular district. The names of these distributors will be found in the advertisement on page 5 of our issue of June 9.



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General.

The Rhyl Council has approved a scheme for the provision of an open-air swimming bath to the east of the pier at a probable cost of £30,000.

Mr. R. A. Cordingley, B.A., A.R.I.B.A., has been appointed by the Council of Manchester University to be Assistant Lecturer in Architecture.

The Liverpool Housing Committee intend to push forward with their schemes of demolition of insanitary property, and to erect new dwellings on the sites.

The Consett Iron Company propose to erect forty-two houses of two rooms each in Watling Street, Leadgate. The plans were passed last week by the local Urban District Council.

Glasgow Town Council have now definitely decided in favour of erecting the city's war memorial on the site of the Gladstone statue in George Square, in accordance with the amended design of Sir John Burnet.

In view of the continued large attendance at the International Theatre Exhibition, and in response to many requests, the authorities of the Victoria and Albert Museum have decided that the exhibition shall remain open till July 31.

The Grimsby Health Committee has decided, with the object of obviating the flooding which has occurred when heavy rain coincides with high tides, to improve the drainage in the Wellow and Weeldry districts, at an estimated cost of £22,000.

The Board of Celtic Studies has undertaken the organisation of a general survey of "hill forts" throughout Wales. In no part of Great Britain are hill forts more numerous or better preserved, but our information regarding them is at present exceedingly fragmentary.

The tender of the National Building Guild, Cardiff, has been accepted for building additional classrooms to the Infants' Council School, at Ystradymnach, Glam., for the Glamorgan Education Committee, from the designs of Mr. D. Pugh Jones, County Architect, Cardiff.

Mr. R. H. King, M.Inst.C.E., has prepared a report on the works necessary at the harbour at the mouth of the Arun at Littlehampton, and recommends the replacement of the existing wood piling by piles of reinforced concrete. The cost is estimated at from £50,000 to £55,000.

It has been decided that the Salisbury Cathedral war memorial shall take the form of a chapel in the south bay of the south transept, and eight lights, six on the east side and two on the south side of the transept. By this means the original intention of a "Warrior Aisle" complete in itself will be maintained.

Mr. J. Stanley Beard, M.S.A., 52 Baker Street, W.1, is the architect for the conversion of an existing building in Palace Street, Buckingham Palace Road, S.W., into a picture theatre for the St. James' Picture Theatre Co., Ltd. The tender of Messrs. F. and H. F. Higgs, Ltd., amounting to £22,750 has been accepted for the work.

The West Riding County Council have adopted a report recommending the erection of new elementary schools at Thurnscoe (500 places), Maltby (750), and Bentley (500); also the provision of a central school at Queensbury. The Council have given formal notice of their intention to erect an elementary school at Stainforth for 500 places.

A beginning is to be made with the reconstruction of the Buxton Natural Baths, at an estimated cost of £20,000. For some time there has been a serious loss on the undertaking, owing to the dilapidated condition. When completed the baths will rank amongst the finest in Europe. The work of reconstruction is expected to take from three to four months.

A company has been formed combining The Tubular Scaffolding Co., Ltd., and The Patent Rapid Scaffold Tie Co., Ltd. Representing as they do two prosperous companies supplying two valuable patented building requisites, the future of the company should be assured. The prospectus will be found in our advertisement pages, under the title Scaffolding (Great Britain), Ltd.

At the last meeting of Lichfield Rural Council the Surveyor (Mr. Herbert Elliott) presented a statement as to the working of his new stone-breaking plant for the production of road material. He said the year's output of 10,000 tons of local material under his scheme would cost £3,250, against £9,500 for imported granite, a difference of £6,250. As a penny rate produced £700, the difference referred to was equivalent to the saving of a ninepenny rate.

"What's the use of having a Trade Union ticket in your pocket if the boss has your head in his?" This pertinent question is asked on the cover of an Educational Fund Manifesto just issued by the National Union of Building Trade Workers. Some time ago the Union agreed to a levy of 1s. a member per annum for educational purposes, and this manifesto outlines the scheme, which provides both for free local tutorial classes and for residential scholarships at the Labour College, London.

The first meeting for the new session of the Incorporation of Architects in Scotland was held in Edinburgh on the 13th inst., Mr. T. P. Marwick, president, in the chair. The standing committees were appointed, and the order of precedence of the vice-president fixed as follows:—Glasgow, Edinburgh, Aberdeen, Inverness, and Dundee. There were elected to membership 1 fellow, 7 associates, and 5 students. The total membership is now 597. Among the important matters under discussion were the new building by-laws and the capital sum to be devoted to education.

The Council of the R.I.B.A. wish to call the attention of members to the understanding reached with the London Master Builders' Association and the National Federation of Building Trades' Employers in 1909, when a notice was published in the R.I.B.A. Journal (January 22, 1910) recommending members of the Royal Institute to have quantities prepared for all ordinary works above £500 in value. Owing to the increase in the cost of building, this amount has since been increased by the Builders' Organisations to £1,000, and members of the Royal Institute are now recommended by the Council to have quantities prepared for all ordinary works above £1,000 in value when asking builders to tender.

The Welsh University Board of Celtic Studies report that in view of the forthcoming Cambrian Archaeological Association meeting at the Haverfordwest meeting, it was thought to be a good opportunity to recover the general plan of the Augustinian Priory at that place by a little judicious excavation. The walls were obviously near the surface, and the excavation was a comparatively small undertaking. The matter was taken up by the local committee of the Cambrian Association under the direction of Dr. Mortimer Wheeler, and their funds were supplemented by a grant from the Society of Antiquaries, and the Board of Celtic Studies voted a subsidiary grant for this purpose. The work of excavation has now been carried out very satisfactorily, and has rendered possible a reconstruction of a greater part of the plan of this monastery. The results of the work will be brought before the Cambrian Association at its forthcoming meeting.

A new testing machine for compression and bending is being installed in the engineering laboratory at Armstrong College, Newcastle-on-Tyne. This machine, which is the first of its kind, is capable of dealing with columns ten feet in length and beams of nine feet span, with a maximum width of four feet. This width is one of the unique features of the machine, as in previous testing appliances the width has been restricted to a few inches, and in consequence broad flange or T beams, as used in reinforced concrete construction, would not be satisfactorily tested. The maximum load of 120,000 pounds is obtained by hydraulic power: and the measurement of the load is made by means of multi levers in conjunction with the ordinary steelyard which is graduated to read in steps of 25 pounds. This is a positive method of measurement, thus doing away with the uncertainty of hydraulic pressure measurements. The importance of this machine will be apparent when it is considered that the number of actual tests of columns upon which engineers base their calculations is very small and, moreover, the tests which are available are upon materials which have been greatly improved in recent years. It is hoped that this new plant will be available for demonstrating at the next open day of the Armstrong College. The machine was constructed by Messrs. W. and T. Avery, Ltd., to the College specifications.

"The Architect" Fifty Years Ago.

JULY 20, 1872.

STREET NOMENCLATURE IN PARIS.

The subject of altering the names of old boulevards and streets and naming new ones has been for some time under the consideration of a special commission, appointed by the Municipal Council. The commission has now made its report, and recommends that in future no public way shall bear the name of a living person or any title having a political signification. This, we may say, is a sensible recommendation, which had it been adopted before would have saved a vast deal of trouble and confusion. Anything more absurd than the Rue Dix Decembre, or the Rue Quatre Septembre, cannot well be imagined: a mischievous Imperialist journal proposes that the latter shall be changed to the "First of April!"

The old Avenue de l'Impératrice will, it is said, be in future the Avenue du Bois de Boulogne; and, of course, the avenues called after the King of Rome, the Reine Hortense, the Emperor, Baron Haussmann, and other Imperialists will be all re-named.

Among the new names adopted are those of Lally-Tollendal, the writers Seveste, Alexandre Dumas, and Frédéric Soulié, the sculptor David (d'Angers), Marshal Niel, General Lamoricière, General Charras, and the brave Franchetti, who fell at the head of his free corps in one of the sorties from Paris.

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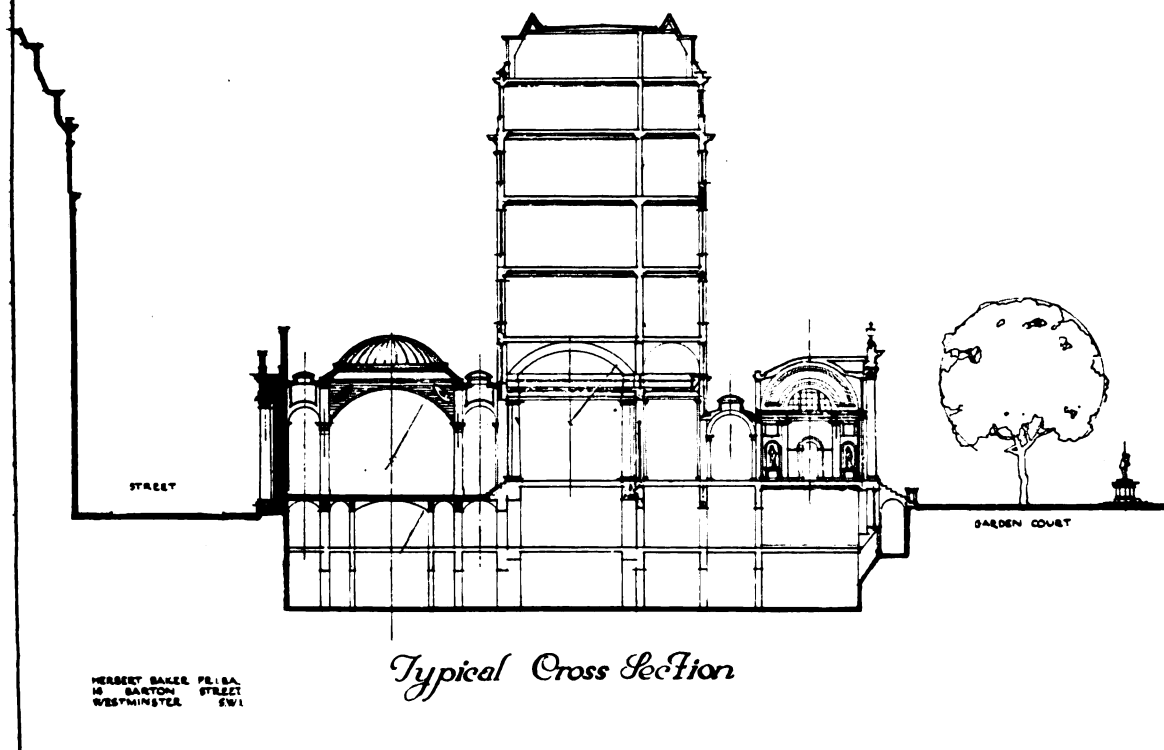
The Bank of England.

THE Bank of England is described as being Sir John Soane's masterpiece, which is equivalent to saying that it is the most outstanding work of an architect whose life bridged the gap between the Georgian era and the nineteenth century. This was an age when the great and vigorous work of Wren and Sir William Chambers was gradually giving place to a type of architecture which became more and more revivalist and less and less traditional in its style, but had not reached the period of the Greek revival which has left us such buildings as the British Museum, Euston Station, and St. Pancras Church. Architectural style had lost its independence, and was becoming crystallised into pedantry and antiquarianism. Sir John Soane had not an entirely free hand in the design of the Bank of England, for, in the first place, he had to retain the original building erected from the design of George Sampson in 1736, together with the wings added by Sir John Taylor between 1766 and 1786, while the building was carried out in sections. The net result is a series of halls, courts, and buildings lacking any

coherent and clearly understandable plan, the accommodation consisting in a large measure of carefully designed top-lighted halls bound together by a blank wall only pierced by doorways in some four places, the circumscribing wall masking but not expressing the internal accommodation provided. The plan reminds one in this respect more of some Eastern palace than that of a European building, enabling us fully to realise the immense advance in planning which has been made since Sir John Soane's time, for no architectural assistant who had had a few years' training could fail to produce something more coherent and logical. When it is remembered that the site is in the heart of the City of London and is of immense value, while belonging to a great institution which urgently needs additional space, the necessity for drastic reconstruction is readily apparent.

The directors of the Bank have done well in calling in the assistance of Mr. Herbert Baker, whose general suggestions we now illustrate, for he has produced order out of chaos, and that in a manner which shows the

PROPOSAL FOR RECONSTRUCTION
of the
BANK OF ENGLAND.



most careful consideration of the means by which the chief features of the work of Soane can be preserved and amalgamated in a structure which gives the Bank of England the additional accommodation it needs. He has produced a fine and architectural plan, in which the chief problems raised have been solved in a masterly and most efficient way. As the Bank is surrounded by comparatively narrow streets, it has been very rightly considered that the higher portions of the new building should be set back from the frontages. Along the Threadneedle and Bartholomew Lane sides of the site this makes it possible to retain a number of Soane's banking halls, which are top-lighted, and these are continued by further similar halls round the remaining two sides of the site. Behind these top-lighted halls are a range of higher buildings, the width of the buildings being about 30 feet. By this means some 27,000 feet of accommodation on each floor are obtained, the buildings being six storeys in height above the ground level, with two basement storeys below. Within the space remaining inside these higher buildings is a fine garden court, 115 feet by 80 feet in size; and at the back of this garden court the fine suite of Court Rooms designed by Sir John Taylor are re-erected, as it is impossible to retain these on their present site without spoiling the general layout. To right and left of the garden court are the offices of the Governors of the Bank and of the chief officials.

The triangular space formed by the Lothbury and Prince's Street fronts is occupied by a series of circular and elliptical courts, by which access is given to the anterooms connected with the Court Rooms. Not the least merit of this very fine plan is the manner in which the architectural breaks in the external wall are

utilised for the new entrances required. The official statement regarding the scheme which we publish leaves little ground for criticism, except that the authorities have shown themselves, if anything, over-cautious in their desire to retain Sir John Soane's work unaltered. We say this because, with all its merits, the Bank of England is not a great architectural masterpiece, but the work of an eminent architect whose imagination was doubtless fettered by the false ideals of the age in which he lived, and who could not, for that reason, emulate the great work of Wren or Chambers, while he had not the freedom of outlook of architects of the present day and the truer estimate which convinces us that those who seek inspiration from classical architecture must avoid the letter while gaining inspiration from the spirit of old work.

But be this as it may, we must congratulate Mr. Baker in his avoidance of the pitfalls with which such a task as his is beset, and we are glad to be able to unhesitatingly endorse the general lines on which he has suggested solving a most difficult problem. If he is entrusted—as we hope he will be—with the actual work, we hope he will not allow himself to be too much fettered by a desire to design in accordance with the precedents set by Soane. For nothing which Sir John Soane ever did convinces us that he could have produced so admirable a scheme as that prepared by Mr. Baker; and while, for economy and other reasons, it is wholly right to retain much of the existing work, we may be quite sure that the architect who has designed the Secretariats at Delhi and the great South African Parliament House could erect on the site of the Bank a finer building than Sir John Soane ever dreamed of.

Why are Sculptor and Builder Divorced in Modern Life?

By Amelia Defries, M.R.I.

One is struck by the uninspired, often even unskilled, sculpture used in the ornamentation of finely designed modern buildings in every country. I am writing, for example, on the terrace of one of the most magnificent pieces of modern architecture in Italy—I do not hesitate to say that the Hotel Excelsior at Lido is equal in many ways to its forefathers in Venice. It is beautifully built, too; the brickwork is fine, and so is, in its own style, the exterior ornament. But the lions, etc., which a stonecutter has been allowed to add, are paltry and without character, not even worthy of a graveyard. This sort of thing is all too common in England, as also in France, in these days. Why is it? Are the capitalists who pay for such extravagant buildings afraid of an extra thousand pounds which the sculptor might charge? But are there not young sculptors who would gladly execute a big work at a living wage for the delight of doing it, and for the honour and glory it would bring, if they were provided with the materials in which to work out the finest things of their imaginations?

Is not the truth of the matter that neither architect, builder, nor capitalist knows even the names of such carvers in stone?

Yet in my hours around the exhibitions of many countries I have noticed literally dozens of fine talents going to waste for want of opportunity to work in close touch with the master builders. Of course when a man has reached fame he can ask almost any prices he likes; but even then an artist worthy of the name would accept a nominal sum, surely, if provided with material, ample time, and a free hand, to work out some noble theme for the public benefit? Did not Watts (famous enough at the time) offer to decorate the whole of Charing Cross Station for nothing? If sculptors were asked to come forward and submit designs for the embellishment of the London County

Hall or for Waterloo Station, I do not believe their charges would prove frightening.

Even Spain, which has lately produced a man whom history will probably call the first great Spanish sculptor, has not the wit to seize him to use him in this way. He adores carving stone—the harder it is the better he likes it; he takes his hammer and chisel and sets the sparks flying. Without even a preliminary sketch, he can make the rough block yield any expression and all manner of form. He loves, too, to carve wood, and can give it a subtlety scarcely even seen in wood-carving—for instance, his "Aguadora" (Salamanca) exhibited in the last Salon d'Automne.

There are abstract sculptors, too, whose original designs are clearly waiting to be used in connection with building. Of these there is no one more fitted to fulfil a serious commission than the Englishman, Laurence Atkinson, about whom Horace Shipp is publishing a book. It would not be difficult to make quite a list for the use of architects and builders, but would they use it?

When I look at the birds and animals carved in Diorite by Hernandez, I see at once what use the Middle Ages would have made of such works. They would have been a part of the decoration of public and private buildings, a source of pleasure and wonder to generations of passers-by. But this age which professes democracy, but is really in the hands of unenlightened plutocracy, sees no public use in such a man, and lets his works pass from exhibition to exhibition, and then either into the closed-in rooms of some millionaire or else back into the sculptor's seven-storey high studio.

When democracy really comes, such things will be used by builders for the public, or "by the people for the people."

The Reconstruction of the Bank of England.

Official Description.

We understand that the question of rebuilding the Bank of England has for some time been engaging the attention of the Court of Directors, in order to provide on the existing site accommodation for the whole staff, of which the greater part is now working in various buildings in other parts of the City.

■ For this purpose an entire reconstruction of the interior will be necessary. But in order to preserve as far as possible the style and character of the existing building it is proposed to keep the present outside walls with as many of the old rooms behind them as possible; to continue a similar series of top-lighted offices round the site, and, inside the enceinte thus formed, to raise the building to the height of four or five floors. In the course of the consideration of these preliminaries, the Bank consulted on the general question the President of the Royal Institute of British Architects, Mr. Paul Waterhouse, who was unhesitating in his reply that the only possible way of harmonising the artistic claims of the Bank with its present duties lay in the direction of building a central structure of the necessary height surrounded by a girdle of lower buildings composed, in fact, of the existing external walls—unaltered and without any avoidable superstructure.

The Bank furthermore have been in consultation with Mr. Herbert Baker, F.R.I.B.A., and Mr. F. W. Troup, F.R.I.B.A., and we publish some sketches which, with the following notes, have been prepared by Mr. Baker:

“Long and sympathetic study has been given to the determination of the extent to which the more valuable portions of the old building of the Bank of England could be retained consistently with the creation of a new structure worthy of The Bank, and sufficient for its needs.

“The facts of the site in relation to its light and the surrounding streets and buildings, together with the practical and sentimental values of silence, security and seclusion which the present blank external wall affords, all seem to point favourably to the policy which it is proposed to adopt and to a solution of the problem on the lines of Sir John Soane's own design of top-lighted halls screened from the street by his great blank wall.

“In an architectural appreciation of this building, Sir John Soane's life work and masterpiece, it may be recognised by those who have given most study to it that his genius is more specially distinguished by the powers of invention which he shows in the varied and ingenious treatment of domical-vaulted and top-lighted spaces. His banking halls seem to give an exceptional sense of dignity and fitness of expression to a bank, and honour can therefore be best paid to his memory not only by the preservation of these halls, but by the acceptance after the test of a century of his invention as the motive idea for the natural aftergrowth of his building.

“The proposal under consideration by the Directors includes the retention in its entirety of the outside blank wall with such of Soane's rooms as lie behind it and the construction of a sequence of similar rooms behind the old wall right round the perimeter of the site.

“A feature of characteristic beauty in the Bank is the open Garden Court on the site of the old churchyard with its venerable tree and Taylor's old Court Room looking out upon it. This small Court, however, if the walls round it are raised, would lose its light, its tree and its charm. It is therefore proposed to build a larger open court in the centre of the site where it will best fit the organism of the building, and to reconstruct on the north side of it, with the same southern aspect as of old, Taylor's old Court Room with its attendant Committee Room and as many of the attractive little ante-rooms as may be possible.

“It will be between this inner court and the outside sequence of Soane's banking halls that it is proposed to rear the new inner building to the fullest height which may be held to be legitimate and advisable for the architectural harmony of the building as a whole, and for the light and health of the surrounding narrow streets and buildings. It has been considered that such a plan, while retaining what is of the greatest value in the old building, will give at least as much accommodation on the ground floor as would be possible in any scheme of reconstruction, and on the upper and basement floors sufficient well lit and ventilated office space for the future needs of The Bank.

“Most sympathetic consideration has been given to the retention of the Rotunda, but it has been considered that the retention of its great masses would involve too serious a sacrifice of space and efficiency. But there are throughout the building many ingeniously vaulted rooms and corridors, and it is hoped that after more prolonged study of these and of the requirements of the new building it may be found possible to set in the new

building some more gems of the art of Soane, or of Taylor, or even of Sampson.

“It must be understood that the drawings now published in no way represent any final solution and have been prepared only as illustrations of the very complex problems involved in the rebuilding scheme. The plan illustrates the three main features herein described, the outer sequence of top-lighted rooms, the new inner court and the high building between them. The section is intended to illustrate a possible method of lighting through the great width of continuous offices. The perspective illustrates the general appearance of such a building and presents only a possible solution of the problem of connecting the old low and new high building in some way that will give visible architectural expression to the unity of the building and the sense of the continuity of the life of The Bank.”

New Books.

THE RENAISSANCE OF ROMAN ARCHITECTURE.*

Sir Thomas Jackson is undoubtedly right when he points out that the term Renaissance as applied to a phase of English architecture is incorrect, inasmuch as the art of Rome had never passed into the national vernacular as it did in Southern France and Italy. As Sir Thomas says, though the Saxons wanted to build *more Romanorum*, their idea was to build in stone like the Romans, and not in turf or wood *more Scottorum*. There was not a single vestige of Roman architecture in these islands important enough to serve as a model or to inspire imitation. Here the change was the result of Humanism and the patronage of royal or noble *dilettanti*; the introduction of a new method was not due to the impulse of craftsmen, but to ideas which were imposed on them. It is these facts which undoubtedly coloured the whole character of the Renaissance in England, a character which was so marked that it was not until the eighteenth century that buildings were erected which can be said to belong to the Renaissance in the sense in which it was understood in more Southern lands.

The one building of early date which may be termed purely Renaissance in its character is the Banqueting Hall in Whitehall, and subsequent work revealed how much that building stood alone in the elimination of the last traces of mediæval art. Elsewhere we find a mediæval spirit and inspiration constantly reappearing, though evolved in new forms, and it was not until the formalists held undisputed sway that the new movement was completely triumphant, and then only in towns and centres of population.

As might be expected, it is the early period of the Renaissance which the author dwells on in most detail. His book gives a full account of the growth and changes of the great Elizabethan and Jacobean houses and the picturesque hybrid architecture of Oxford and Cambridge. Ten chapters are devoted to these subjects, leaving three to describe the work of Inigo Jones, Wren and later architects down to Sir William Chambers. Sir Thomas emphasises the strength of mediæval traditions, the superficial character of the changes made, and the manner in which the use of mullioned windows, high roofs and chimneys was adhered to. This is, we think, useful material for thought in the present day, when attempts are being made by schools and students to draw more and more near to the classical examples which are followed more closely in other lands, but which do not often appeal to the national taste. The bow of style has in recent years been bent by architects in the classical direction, but it may be questionable whether we should not produce both as good architecture and work which would be better appreciated if we studied the manner in which our forefathers always harked back to forms and methods which were throughout the period of the Renaissance constantly showing their vitality. Sir Thomas rightly puts the matter in a concluding sentence: “The question for us is not the battle of Classic or Gothic, but that of convention or liberty. There are in truth but two styles of architecture—the Bond and the Free—and on our choice between them our future will depend.” It is this absence of dogmatic choice which has given us a series of buildings which, while they may meet with criticism from the formalists, are unequalled in qualities which appeal to English people; and it is buildings designed in a similar vein of freedom which will most appeal to our people, though they may be condemned by purists. The book is well produced and abundantly illustrated by drawings and photographs, and is written in the clear, terse and scholarly manner which is characteristic of the author.

* “The Renaissance of Roman Architecture. Part 2. England.” By Sir Thomas Graham Jackson, Bart., R.A. Cambridge University Press. 42s. net.

Our Illustrations.

PROPOSAL FOR RECONSTRUCTION OF BANK OF ENGLAND. HERBERT BAKER, Architect.

THE S.S. LACONIA. MESSRS. MEWES & DAVIS, Architects.

We are glad to give the finely designed decorative scheme of this great liner as it shows the manner in which Renaissance decoration can be effectively and simply applied to the architectural scheme of a ship. Nothing which has been attempted is overdone or redundant, and for that reason full value has been given to the architectural scheme. The work has been carried out from the designs of Messrs. Mewes & Davis, architects.

1ST CLASS DINING SALOON.—This room is characteristic of the early Adams Period with the influence of Pergolesi in the painted decorations. Scagliola columns with finely modelled caps in bronze support the galleries, and the ceiling is very delicately executed after one of the best existing examples, having as its main features painted plaques and Griffin corner motifs. Finely wrought iron balustrading encloses the two balconies fore and aft. Two fine pictures form the features on the lower walls to the galleries, which are enclosed.

1ST CLASS LOUNGE.—The general scheme of decoration in this imposing yet homely apartment is of Abraham Swann influence, and is typical of the Georgian houses in Hatton Garden. The coach roof is surmounted by a richly painted dome and the whole supported by clusters of fluted columns and pilasters with enriched capitals. This room boasts an imposing fireplace ingie with an ornate chimneypiece, having at each side recessed niches for china.

1ST VERANDAH CAFE.—This café lounge is situated port and starboard, and flanks the public rooms. The scheme here is trellis, being executed in natural teak with the background treated in stucco. Large windows at the side afford protection if desired, at the same time permitting of an uninterrupted view.

1ST CLASS STAIRWAY.—This well, with its adjoining vestibules and corridors, rises through five decks and is treated in harmony with the 1st Class Dining Saloon.

1ST CLASS SMOKE ROOM.—This interpretation of Early English Domestic Architecture with Jacobean influence has made this Smoking Room one of the outstanding successes on this miniature "Aquitania." Here the architects have based their design on the Mermaid Inn at Rye, and have produced the atmosphere of an old Sussex seaport inn. The walls are in wainscott oak and the ceiling heavily raftered. The coach roof with its windows is supported by massive piers pegged and bearing the marks of the adze. This room boasts a fine ingie fireplace built entirely of hand-made bricks, and the spacious and heavily mullioned bay window opposite commands an uninterrupted view astern.

1ST CLASS WRITING ROOM.—This scheme is Adams of the domestic order with pilasters in white with enriched waterleaf caps. The walls are in a delicate shade with the enriched dado rail and skirting, giving this well-designed room an atmosphere of harmony.

2ND CLASS DINING ROOM.—This room lent itself to a Georgian scheme of broad and ample proportions. The centre portion rises to a vaulted dome pierced by lunettes enriched with finely modelled plaster, this being carried on clusters of columns and pilasters of the Ionic order.

2ND CLASS LOUNGE.—Here domestic simplicity with restrained Adams influence has been aimed at. The doors being in richly figured mahogany and the ceiling in plain plaster.

2ND CLASS SMOKE ROOM.—Here domestic influence of the sixteenth century has been aimed at, as in the 1st Class Smoke Room the designers have tried to give the effect of a simple apartment with the maximum of comfort. The walls above the low panelling are half timbered with oak, giving a pleasant contrast to the mellowness of the plaster. The long rows of windows in the comfortable bays give this room that quaintness often seen in these old hostels.

2ND VERANDAH CAFE.—This well-sheltered arbour, with its large folding doors, permits of an uninterrupted view astern, and is panelled out in green trellis with gay chintz curtains to the windows. The walls are treated in a warm shade of stucco, the furniture being in natural cane.

The general contractors for the internal fittings and decorations were Messrs. Robson and Sons, 42 Northumberland Street, Newcastle-on-Tyne. The door furniture, which was specially designed, was supplied by Messrs. N. F. Ramsay & Sons, 1 Victoria Street, Westminster, S.W.1. The grates and chimney pieces, some of which are shown in our illustrations, were made by Messrs. Carron Company, 50 Berners Street, W.1. and Carron, N.B. The fan lights and leaded lights were by Messrs. The Kingsmill Art Metal Co., 142a Fulham Road, S.W.10. The ornamental iron work on the 1st and 2nd class staircases as well as the lift enclosures and iron and brass grilles for the well hole above the 1st class dining saloon, were carried out by J. W. Singer & Co., Frome.

The whole of the dome ceilings, cornices, beam casings and lower ceilings, and all the principal reception rooms throughout the ship were executed in fibrous plaster by Messrs. George Jackson & Sons, Ltd., 49 Rathbone Place, W.C.1.

Both Hairdressing Saloons are lined with White Vitrolite Dado by The Vitrolite Construction Co., 1 Victoria Street, S.W.1, with finishes at the bottom upon an 8 inch high Black Vitrolite Skirting, and finishes at the top underneath a cornice round the ceiling.

Twenty columns in the First Class Dining Saloon are in Jaune Fleure Scagliola Marble manufactured and fixed by Messrs. Bellman, Ivey & Carter, Ltd., Linhope Street, Dorset Square, N.W. Eight of these are erected independently. The remaining twelve are fixed round steel columns with imperceptible joints by a special anti-vibration method which has proved most successful in the "Aquitania" and other vessels by the same architects.

Incorporated Church Building Society.

At the monthly meeting of the Incorporated Church Building Society, held at 7, Dean's Yard, Westminster, on Thursday, the 20th inst., the Hon. Sir E. P. Thesiger, K.C.B., in the chair, grants were made towards building the church of All Saints, Luton, £250; rebuilding S. John's Church, Walthamstow, £200; for the first portion; and towards enlarging or repairing the churches at South Acton, All Saints, £50; Aston, S. Giles, Herefords, £35; Bethnal Green, S. Paul, £40; Kettlebaston, S. Mary, Ipswich, £25; Ninfeld, S. Mary, Sussex, £25; Padstow, S. Petroc, Cornwall, £35; Par, S. Mary the Virgin, Cornwall, £35; Ripplingale, S. Andrew, Lincs, £40; Ruishton, S. George, Som., £50; Southampton, Holy Trinity, £50; and Ravenscar, S. Hilda, Yorks, £110. A grant of £15 was made from the Mission Buildings Fund towards repairing S. Cuthbert's Mission Church, South Acton. Grants were also paid for works completed at Ravenscar, S. Hilda, £50; Bedford, S. Andrew, £125; Sutcombe, S. Andrew, Devon, £30; Northmarston, S. Mary, Bucks, £45; Tipton, S. John, Staffs, £75; Wormshill, S. Giles, Kent, £35; Charlton Adam, Som., £25; and Kingsclere Woodlands, S. Paul, Berks, £25. In addition to the above, £530 was paid out of Trust Funds towards small repairs to 22 other churches.

As evidencing the increase in church building and repair, the number of applications dealt with at the above meeting is the largest since the beginning of the war.

The Board of Architectural Studies of the University of Cambridge have appointed Mr. D. Theodore Fyfe, F.S.A., F.R.I.B.A., as Master of the Cambridge University School of Architecture. Mr. Fyfe will take up residence and duty at the opening of the Michaelmas term. The school also has as its officers Mr. T. H. Lyon, M.A., of Corpus Christi College, Director of Design, and Mr. H. C. Hughes, M.A., A.R.I.B.A., of Peterhouse, assistant instructor. The lecturers include Professor Beresford Pite and several university professors and lecturers. The lecture list for next term will be issued shortly.

Notes and Comments.

Mr. Aldridge Again.

Robespierre has passed down to history as the "Sea green incorruptible," and Mr. Aldridge will equally merit the designation of the "Dauntless Indefatigable." Addressing the International Conference of Settlements in London, we are told he said:—

"Many people had a distorted idea of the new houses. Ninety-nine per cent. of them were an enormous advance on pre-war dwellings; only 10 per cent. had but two bedrooms, and 80 per cent. had three bedrooms, a living-room, parlour, and bath, and were fairly creditable to the local authorities who built them.

"They had certainly cost a great deal of money, but this was not the fault of local authorities, and he regarded it as a piece of impertinence that a business committee, such as the Geddes Committee, should come down on the authorities for extravagance when they had been exploited by business men.

"Before the war, Mr. Aldridge continued, there were 3,000,000 people living in slums and 5,000,000 living under bad conditions in the urban areas. The country was now beginning to realise the shortcomings of its housing system, and he believed the next 20 years would see great changes in the position."

What Mr. Aldridge has always omitted to estimate for his hearers' benefit is the probable number of houses for the working classes which would have been erected had not the Finance Act of 1909-10 been passed. The Housing Programme of the Government was brought about by that mistake in legislation, and we all suffer in convenience and in finances because they have attempted to interfere with natural economic laws. Their present attempt to reform the constitution of the House of Lords shows how oblivious our rulers are to the logic of facts. The Lords rejected the Finance Act on the ground that it was a political and not a financial measure, and were penalised for doing so, but events proved them to be right. The hereditary principle may be indefensible in theory, but works well in fact, the elective principle may be perfect in theory but works badly in fact, while its legitimate outcome, proportional representation, is the scorn of politicians.

Ken Wood.

We are glad to note that the efforts of those who have fought to preserve Ken Wood for the public have met with a large measure of success. A contract has been entered into between the Preservation Council and Lord Mansfield for the purchase of 90 to 100 acres of the area at a reduced price of £1,350 an acre. Six months are given for the completion of the transaction, but as £130,000 has been either definitely promised or actually subscribed it is stated that only another £3,000 will be required to complete the transaction. The new area will be a welcome addition to the beauties of the Heath, and will for the first time be fully appreciated when the public have free access to the new extension. It is too late to surround London with a green ring like some of the Australian cities, but no effort should be spared in the endeavour to add to the number of open spaces within the area of the county of London.

Tintern Abbey.

The members of the Society for the Protection of Ancient Buildings who visited Tintern Abbey to investigate the repairs undertaken for its preservation by the Office of Works do not appear to have found very much wrong with the means taken to ensure it from further decay. It is quite certain that our forefathers would neither have used steel at Westminster or ferro-concrete at Tintern, but it seems to us that that is no reason why we should not take the shortest and most effectual means to preserve the buildings left to us from past ages. If we want to follow the precedents of the past we should probably use the timbers of Westminster Hall in some newer building, and would probably utilise Tintern as a ready-made quarry in our eagerness to build some adjoining structure. We are glad to bear testimony to the efficiency of the Office of Works in carrying out what should be its only functions—the upkeep of national buildings—just as we should be equally glad to see it precluded from what are not its

proper functions—the erection of new buildings and the organiser of ambitious programmes which belong to the field of municipal and private enterprise.

Regent Street.

Under the heading "Exit John Nash" Mr. Leonard Pomeroy regrets the wiping out of old Regent Street and raises a plea for the retention of the County Fire Office at the bottom of the Quadrant. We think such a protest comes too late because, though it is a well-proportioned piece of design in its relation to the buildings of old Regent Street, it will lose that proportion when surrounded by higher structures, as it soon will be. In other words, it is too late to suggest that any part of the Regent Street we knew should be preserved and it would certainly be unfair to ask the Crown to forego the increased revenues it may obtain from higher buildings. The mistake was in not treating Regent Street as a whole, but that mistake having been made it seems to us nothing can be done until the new leases fall in, except the obvious course of carrying out both sides of the Quadrant in general accordance with the frontage designed by Norman Shaw, which rather than the older buildings represents what may give some unity of style to lower Regent Street.

The Restrictions of Rents Act.

We are glad to see the following paragraphs to a letter written to the "Evening Standard" by an architect, regarding the Rent Restriction Act.

"If the nation wants houses to be provided like all other commodities are, by business methods, they must remove the restrictions which prevent the flow of capital into the industry, on which it entirely depends, or must make up its mind to revert to the recently abandoned system of subsidising housing out of its own pocket, a method producing extravagance and other undesirable results, as the experience of the last few years has shown.

"Clear the restrictions, and the supply will have a chance of overtaking the demand. There may be some hard cases in the process—that is always the case when the change from abnormal to economic and normal methods is started.

"A case could be made for a year or two's further control of the smallest of the houses, where the standard rent was under, say, £35 a year."

But the strongest objection to the Rent Restriction Act is not here even stated. It is its iniquitous injustice; for why should those who have provided what is wanted by the community at their own cost, and not that of the community, be compelled to rent such houses to the public at a reduced price.

Cheaper Buildings.

From a contemporary we give the following announcement, which shows the rapid fall which has taken place in building costs and is of good augury.

"That houses can be built to let at an economic rent without Government assistance is being shown at Bournville. A contract has been let to Messrs. H. M. Grant & Co., of Kings Norton, to build twelve houses at May Green, in the village of Bournville, for £6,109. Three types are included in the contract, and the cost will be £564 each for six of them, £440 each for four of them, and £478 for the remaining two, which works out at 9½d. per cubic foot. As the houses will have cavity walls and tiled roofs, this may be considered very reasonable.

"The capital will be found under the new scheme by which the Bournville Pension Fund Trustees take up a mortgage on two-thirds of the cost at 4 per cent., the balance being found by Bournville Finance, Ltd., at 5 per cent. The land is leasehold, and is rented at 1½d. per yard from the Bournville Village Trust. Making reservations for architects' fees, legal expenses, management and all other charges, the economic rent works out at 12s. 6d. for a four-roomed house, 13s. for a five-roomed house, and 14s. 6d. for a six-roomed house (the yearly rents being £32 10s., £33 18s., and £37 15s. respectively).

"The National Building Guild were only a few pounds dearer than Messrs. Grant, and six more houses are being tendered for by them. It is possible that these may be even cheaper, as the Guild share half any saving they may make over the contract price. Still cheaper types of houses are being designed, and it is hoped that they may be let at still lower rents."

London Art Galleries.

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An exhibition of interest which opened last week was that of watercolour drawings of the Nitrate Regions of Chile by Mrs. Price King at Walker's Galleries. The artist, who had a studio in Chelsea before the war, has spent the last eight years in Chile, devoting herself mainly to portraits and to watercolour studies of the cities and desert regions of Chile, which she has exhibited with success in South America. It is evidently a peculiar country which we see portrayed in these drawings, with exceptional climatic conditions. There is practically little or no rainfall, and hence little or no vegetation; yet the land has a beauty of its own, in the clear blue skies, the intensely blue Pacific Ocean, the desert or Pampas, precious for its nitrate, the background of lower hills with behind them the lofty Cordilleras, and yet behind these, but rarely emergent, the white snow-clad peaks of the mighty Andes.

The first ten or dozen paintings here deal with Iquique itself, the two best being, to my judgment, "Sunrise on Molle, Iquique," and "Shipping Nitrate, Iquique," and the "Officina San Gregorio, Aguas Blancas," where I like immensely the handling of the foreground and the effective strong note given by the buildings in the middle distance. Then we get away into the desert itself, with the wonderful effects of mirage which are shown in several of the drawings here ("Mirage from Huara," "Mirage from Officina Puntilla," and others), in which it is curious to note that in the seeming water reflections are as defined as in the real. One of the finest studies here is not framed, but shown from the artist's portfolio, under the title of "Evening Light on Molle, Iquique." Here, though the sea might, to my thought, be bettered in some points (though this is a matter of personal feeling as to treatment), the handling of the mountains behind, their difficult drawing, fine colour and atmospheric effect represent a high level of watercolour achievement. The whole group of paintings of these desert hills or Pampas, often at an altitude of 2,000 to 3,000 feet, in Nos. 26-32 here is convincing and effective. They give us an impression of the clean, dry atmosphere and the rich colour of this country, so full of mineral wealth. The exhibition was honoured at the opening on July 19 by the presence of the Chilean Minister and Mrs. Augustine Edwards, and will appeal to many who are interested, either financially or from residence, in this remarkable country.

The Society of Scribes and Illuminators was founded in June of last year, and is now holding its first exhibition at the Brook Street Art Gallery. Mr. W. R. Lethaby, in an excellent foreword to the catalogue of this display of beautiful writing and illumination, points out that up to the middle of the last century writing was still a traditional art, and that then it was suddenly degraded into a mere scribble. When William Morris, that great English craftsman, whom it is one of my happiest recollections to have known, by lectures and writing sought to bring about in England a revival of the lesser arts and crafts (I am not even sure that he would have approved the word "lesser") writing came into the scope of his effort, and he studied writing, reformed his own letter hand, and wrote out and decorated several books. Mr. Johnston—as Mr. Lethaby tells us—followed in the same direction, making an intense study of writing about 1890, and there are now numerous experts among us. The necessity and advantage of such expert knowledge are obvious: the good lettering, for instance, of such records as war memorials or rolls of honour is a matter to which I have already directed attention in these columns, but I prefer here to give Mr. Lethaby's own words on this subject. "First we—that is, everybody—should recognise his own handwriting as an art—an amazing art really—to be improved rather than degraded. This partly for its own sake, and also because it is only from a general interest in, and recognition of, art that any improvement in the forms of the things we produce, from pots to cities, can spring up. My second suggestion is

that all our letterings, printings and more ornamental inscriptions should be better done; it is necessary for civilisation that they should be better done, and they must be. Now writing is the basis of all printing and inscriptions. The form of a letter cannot be properly 'drawn' or 'designed'; it must be written. The forms first made themselves in writing with a pen, and proper developments can only be made in the same way." The writer concludes with an eloquent appeal to the public, more directly through this Society, "to do something to improve the commonest of all memorial inscriptions and the design of the slabs on which they are cut."

In illustration of the views above expressed it is interesting to go over the work now being exhibited. As a matter of fact, the question of better lettering of monuments came forward, and received practical attention, in the exhibition held in connection with war memorials at the Victoria and Albert Museum, but much remains to be done. There are several Rolls of Honour and Rolls of Service shown here; No. 7, on vellum, being successful, and the quality of lettering and illumination good throughout. A feature of interest, and new to me in modern work, are the written and illuminated books—for example, a Book of Poems, by Phoebe Rennell, in which the large lettering of the Horatian line "Dulce et decorum pro patria mori" is effective, and of the character which might be used in larger monumental work; and again the "Romance, by R.L.S.," in vellum, sent by Mr. Gavin Rae and designed by E. Johnston, the beautiful Canto III. of the "Paradiso" of Dante, the "Europa and the Bull" from Moschus, where M. C. Bowerley's illumination of a border page of flowers is exquisite, and Edith Goodwin's work on Rupert Brooke's poems (1914). What more delightful gift could there be than a little volume, either original or of some choice author, thus illuminated, like the "Rubaiyat" or John Keats' "Ode to a Grecian Urn" in this very exhibition? Whether we can ever hope to reform our modern handwriting without having fewer letters to write is a problem which I will not enter into here.

The Greatorex Galleries opened this month a very choice exhibition of original etchings and drypoints, which will remain open through August. The artists showing are Troy Kinney, whose figures of dancers alive with movement are well known in America as well as this country, Winifred Austen in her delightful studies of animal life, Albany Howarth and William Walcott in etchings of architectural subjects, and Brantingham Simpson in his familiar scenes of charming nymphs at issue with winged Cupid. The special feature of the present exhibition is, however, the series of etchings, some sixteen in all, by C. W. Cain of the Tigris, "From Basrah to Bagdad" and "Upper Burmah." These are small etchings, very fine in quality and excellent in composition, and bring forward work which is of considerable merit. Among the Tigris series I noted specially "Waiting to pass" and "The Ferry, Basrah," and in the Burmah etchings "In Silent Waters." Among the other etchers here William Walcott's "Villa Quintillie," Albany Howarth's "St. Paul's from the River," Troy Kinney's "Swallows," Brantingham Simpson's Mermaid and Cupid in "What is it?" and Winifred Austen's "Mallard rising" are excellent.

The chamber concert in the National Gallery last week, which I mentioned as about to be held, attracted a good audience, the music given by the string quartet from the Royal College of Music being from Beethoven and Haydn. The experiment is considered to have been a success, and may be repeated next autumn. S. B.

Competition News.

Members and Licentiates of the Royal Institute of British Architects must not take part in the competition for rebuilding Newmarket Hotel, Bury, because the conditions are not in accordance with the published regulations of the Royal Institute for architectural competitions.



THE NEBRASKA STATE CAPITOL BUILDING. BERTRAM G. GOODHUE, Architect.

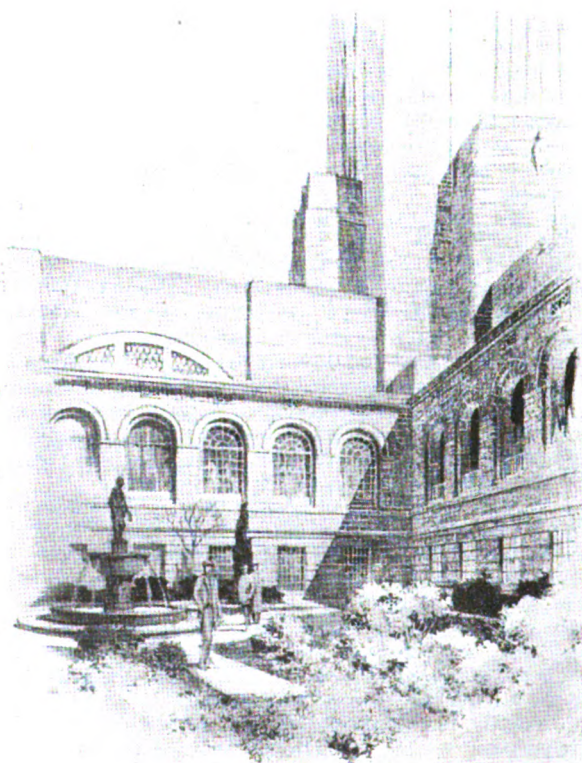
The Nebraska State Capitol.

We give some views of the new State Capitol at Lincoln, Nebraska, which has been designed by Mr. Bertram G. Goodhue, architect, as the outcome of a competition. It consists of a building which is approximately 440 feet square, the buildings being three storeys in height with basements under, and rising to a height of 51 feet. Its chief feature will be a central tower 400 feet high and 80 feet square at the base, which will be visible at a distance of 30 or 40 miles over the surrounding country. This tower will be a utilitarian structure, accommodating many departments and giving storage space, while the space under the dome will be utilised as a war trophy room.

The tower, a strictly utilitarian feature, is the most striking feature of the Goodhue plan, but is by no means its only excellence. The basement and first floor will house the service features and many of the State departments. The chambers which distinguish such a building will be found on the main floor. Entering from the north by a broad flight of stairs, the visitor finds himself in the hall of state, a vaulted apartment approximately 50 feet high, and containing niches for statues and spaces for inscriptions and mural paintings. At the left will be a series of rooms for the governor. Passing directly to the centre of the building and standing in the rotunda, the visitor will have at his right a well-designed senate chamber and at his left a somewhat larger apartment for the house of representatives. In front he will see the doors leading to the supreme court rooms, with the State library immediately above.

Four courts opening to the sky admit light and air to the interior. The arrangement is such that every office in the structure opens either upon the outside or upon one of these courts. The library and the chambers of legislation are lighted by clerestory windows. Even the rotunda, which in practically all capitols must be illuminated artificially, receives direct light from the windows cut into the tower as it emerges from the roof. The feature of the design is that it covers so much ground and has so large a capacity without requiring artificial lighting in any of the departments.

The style of architecture employed is simple and dignified.



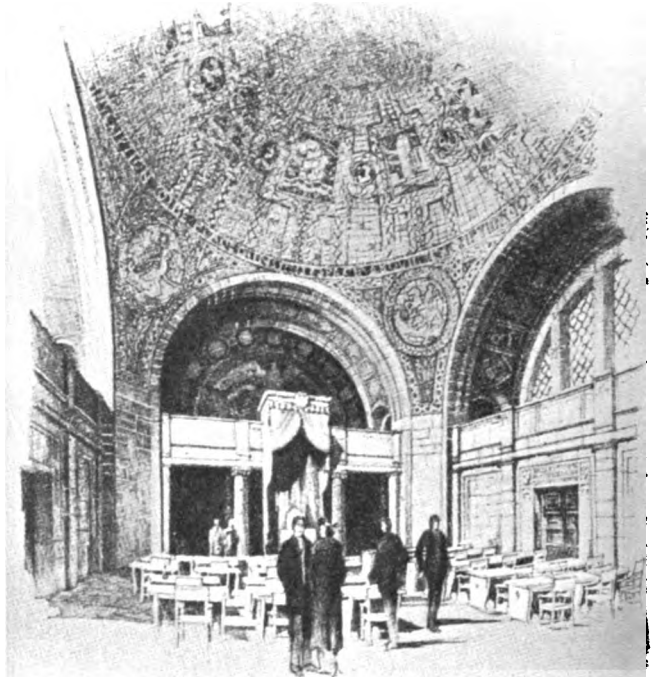
THE NEBRASKA STATE CAPITOL: ONE OF THE INNER COURTYARDS. BERTRAM G. GOODHUE, Architect.

It departs from tradition, but does not become futuristic. Nothing is employed, in fact, but well-established forms. Simplicity is the keynote. Such criticism as has been offered deals with the severity of the lines. Mr. Goodhue has been bold and original, but has not adopted a feature that smacks of the fantastic or the experimental. What he has done has been to take the American skyscraper and with unexampled boldness and courage has fitted it into a public building in a way to give striking architectural results, and at the same time provide convenience, utility and economy to an unexampled degree.

The material is to be of stone of a rather light buff tone. No engineering problems of any difficulty have been encountered. Thirty feet below the surface a bed of Dakota sandstone is encountered. Piers at intervals of 16 feet will be sent down through the clay and sand formation to this rock, and no danger of settling need be felt even under the great tower, which is the only portion that puts unusual stresses upon the foundation walls. The tower itself will be of steel construction with wind bracing to give it security.

The building will be enriched by sculpture, painting and vaulting of coloured and gilt tile. The figures over the main entrance, representing Wisdom, Justice, Power and Mercy, have already been modelled by Lee Lawrie, to whose hands has been entrusted all the sculpture for the completed building. Inscriptions drawn from the great storehouse of the world's wisdom will be carved on the walls. Space will be left for mural paintings, but these will not be included in the present work of the commission. The law calls for the erection of the building for five millions of dollars without furnishing or without the purchase of additional ground. The new capitol is to stand on the site of the old one. It will be the third State house to be erected on the grounds since Lincoln was made the capitol when the State entered the Union in 1867.

We have taken this description as well as the illustrations from the "American Architect," as the building is a noteworthy example of Mr. Goodhue's power of treating great masses in a simple and effective manner.



THE NEBRASKA STATE CAPITOL: SENATE CHAMBER.
BERTRAM G. GOODHUE, Architect.

Press Galleries in Public Buildings.

The acoustic failure of the Press Gallery at the new London County Hall, to which reference was made in our last issue, raises a point of the utmost importance to architects, public bodies, and pressmen alike. To the pressmen, unfortunately, it is not new.

No one, of course, can be more bitterly disappointed than the architect himself when he discovers that in a debating chamber otherwise almost beyond criticism the Press gallery is useless.

From the journalist's standpoint the position is worse than hopeless. Odd fragments of speeches will, of course, be heard, whatever the conditions; but the danger of attributing to members statements which have been only imperfectly heard is too obvious to need emphasis. The result is that adequate newspaper publicity—which it is no exaggeration to say is the life's blood of municipal politics—is all but impossible.

The simple truth of the matter is that the whole idea of a "gallery" for the Press is a mistake. Accuracy is impossible when men are "skied" away near the roof. The height of the topmost row of the County Hall gallery is truly appalling.

The only remedy is to put the reporters on or near the floor level. Members themselves would not object to this, except possibly a pompous few seeking dignity in isolation.

With a little foresight and ingenuity of design, it ought to be possible in any newly constructed chamber to accommodate the Press on either side of the chairman. A small exit door immediately behind the Press tables would obviate any possibility of disturbance of members in cases where, like the London County Council, the session lasts for many hours.

Even the borough councils of London have, in more than one instance, recognised the disadvantage of galleries. Holborn, Chelsea and the Middlesex Guildhall are good examples. All these buildings are of very recent construction, and in each case the Press is accommodated on the floor of the chamber.

On the other hand, Marylebone, Westminster, and Kensington have galleries, but the chambers are comparatively small, and hearing is not difficult. Marylebone especially—the largest of the three—is a miracle of acoustic efficiency.

Until recently, far and away the worst gallery in London for hearing purposes was that of the City Corporation at Guildhall. Now it has a close rival in the new offices of the Metropolitan Water Board. The gallery at the Metropolitan Asylums Board is almost as bad.

But the gallery at the new County Hall outstrips them all. Not only are most of the speakers nearly inaudible, but quite a

large part of the seating accommodation of the chamber is blotted from view by the massive marble portico over the chairman's dais.

Perhaps the most extraordinary thing about this new building is that certain speakers with thin, reedy voices, who could scarcely be heard in the old Council Chamber, are now heard almost perfectly in the new one; but that by the way.

The all-important point is that architects of future public buildings should profit by the regrettable County Hall failure. Press galleries should henceforth be abolished. Even in small and compact chambers they are a potential source of danger.

Acoustics is an elusive subject. As has been demonstrated at the County Hall, expert opinion is of little value when the design of the building exists only on paper.

"The Architect" Fifty Years Ago.

JULY 27, 1872.

THE CARLTON TERRACE BRIDGE.

At a public meeting held last week at the Paddington Vestry Hall a resolution was passed to the effect that, in the opinion of the meeting, the time had arrived when the vestry of Paddington should purchase and complete the Carlton Terrace Bridge, and abolish the toll at present levied upon foot-passengers, such toll being detrimental to the interests of all classes of rate-payers and parishioners. It appeared, from the statement made by the chairman of the meeting, that at the present time there is a sum of £2,500 in the hands of the bankers, which was raised by the vestry in 1869 towards purchasing the bridge, but that, as the owner of the bridge wanted £12,000 for it, the negotiations were not concluded. It appears now, however, that the mortgagees of the bridge will take £6,000 for it; and, as it is believed that the Great Western Railway Company would be willing to render assistance, as it would create a traffic, the present time is considered to be a favourable opportunity for effecting the improvement. The Metropolitan Board of Works are to be asked to contribute a definite sum.

In the House of Lords recently, the Earl of Onslow informed Lord Hamilton of Dalzell that the recommendations of Lord Newton's Committee on the smoke nuisance had been receiving the careful consideration of the Government, and it was hoped to introduce a Smoke Abatement Bill at an early date, though it could hardly be expected that it would pass through all its stages this Session.

Modern Methods in Building Construction.—XXVI.

By Albert Lakeman, M.S.A., M.C.I.

CONCRETING.

The manufacture and placing of concrete are probably the most important items in modern construction, even when this material is not adopted for the main framework of the structure, and yet the general impression in the building industry appears to be that concrete work is easy to perform and no special skill or experience is necessary in dealing with this section of a scheme.

This attitude on the part of many persons has resulted in either indifferent quality, excessive cost or loss of profit in schemes where the exercise of judgment, backed by experience, would have produced good work at an economical price.

The arrangements for making and placing concrete should receive more attention from the architect and contractor than those in any other trade, because concrete is practically the only material which is *manufactured* on the site, and there is therefore more scope for profit and more risk of quality not being maintained.

When the excavations are completed at any point for the foundation work the concreting will commence, and this trade will be carried on more or less during the whole of the contract in any large scheme; thus the stability and often the appearance of the buildings will be very much dependent on the way in which this part of the work is handled. All the other important constructional materials, such as steel, bricks, tiles, joinery, etc., can be made or prepared by special firms away from the site under shop or factory conditions that permit close supervision to maintain quality and prevent waste, and also allow a sequence of operations that can be carried out innumerable times under identical conditions, thus eliminating or minimising risk of error. These materials are also capable of being thoroughly inspected and tested after manufacture and previous to use in the structure, whereas concrete has the final stage of manufacture in the structure itself, and rejection after making and before using is therefore impossible. The manufacture of concrete is carried on under different conditions in different contracts, and thus the sequence of operations calls for a special study in each case.

The architect or engineer must give special consideration to the concrete work to ensure that good quality is produced, and as it will not be feasible for him to personally supervise every cubic yard that is made and placed, it is important that he should satisfy himself that the arrangements proposed are as efficient and foolproof as it is possible to make them. If the methods of measuring and mixing are haphazard, the quantity of water is subject to guesswork, and the plant is badly planned, involving considerable transport of the material after mixing before it can be placed, it will be clear that the risk of indifferent work is a serious one, even if constant supervision is given. From the contractor's standpoint the necessity for efficient arrangements is even more apparent, because this branch of the work affords considerable scope for loss or profit, owing to the fact that the raw materials only are purchased and he is in the position of manufacturer and contractor while engaged in concreting operations.

These operations form a sequence which must be carefully arranged to avoid waste of time and money, because a weakness at any one point will react through the whole organisation and cause a slowing down to a speed which is equal to that maintained at this weak point. For example, excellent arrangements may be made for the transport of raw materials to the central mixing plant, but this will not be taken full advantage of if the unloading arrangements at this point are insufficient to cope with the supplies. Again, ample raw materials must be followed by efficient arrangements for gauging the materials and charging the mixer, and the capacity of the latter must be sufficient to deal with the charges without holding up the work. A large capacity mixer will not be able to work up to its most economical limit if the mixed concrete cannot be discharged and taken away to the place of deposit in a rapid manner,

and the placing of the material in the work must also be arranged to allow the quantities mixed being dealt with expeditiously. On nearly all large schemes where concrete work is in progress considerable loss of time can be seen through waiting at one or more points in this sequence of operations, where the men stand idle while their foreman is vainly endeavouring to speed up some weak unit in the sequence to an output which is beyond its capacity. It is quite possible to instal a concrete mixer that has a capacity of a yard cube per minute, and it can be economically and efficiently run to give this output; but how often is a concreting organisation arranged to handle such a quantity when it is produced? Generally speaking, it will be found that the material after mixing is tediously transported in small quantities across indifferent runways and frequently rehandled unnecessarily, while the men operating the mixer slow down operations because their output cannot be dealt with efficiently. The modern developments in concrete work have been considerable, more particularly in the direction of the application of reinforced concrete to all parts of a structure, and various tests and investigations have been carried out to determine the best materials, the most suitable mixtures, and the principal points to consider in executing the work. The greater part of the investigations during recent years, however, has been devoted to the questions of design and general theoretical principles, and the practical application has been left to develop naturally as the outcome of the increased use of the material. When the work to be executed is of minor importance, and a small quantity of concrete that can be mixed by hand only is required, no special incentive is given to the contractor to organise the operations in a specific manner; but when the contract involves several thousand yards cube of concrete, and there is a probability of the extensive use of the same material in other schemes, the acquisition of plant and special organisation becomes worth while. The modern developments on the practical side have therefore followed the lines of the more extensive use of concreting appliances, because contractors have been compelled to instal machinery which would make the execution of the work possible within a reasonable time. The operations of concrete work can be divided up as follows:—(1) The receipt and unloading of the raw materials, (2) the gauging and mixing of the raw materials, (3) transport of mixed material to the place of deposit, and (4) the placing of the material in the work. Allied to these operations is the work of preparing and erecting the framework and its subsequent removal, but for the moment the framework and the placing of reinforcement can be neglected, as they will need to be more fully considered in dealing with reinforced concrete superstructures, and the present notes are intended to deal with the actual concrete material alone. The operations can be dealt with in sequence, and some general notes given which will indicate the principal points to be considered. The first item given is the receipt and unloading of the raw materials, and this is important, as it is quite essential to organise the unloading in a manner which will reduce the labour cost to a minimum both at the time of receipt and when the materials are actually required for use. If possible, a railway siding should be provided right up to the mixing plant, and the materials coming in by rail can be unloaded at the point required; and if some of the material is received by road transport, this also should be delivered right up to the same position. When the fine and coarse aggregate is received by rail the most economical and expeditious method will be to unload this directly from the trucks into a storage bin constructed over the mixer, and this can be done by the installation of a conveyor or a derrick operating a grab bucket.

If the storage bins are full and material continues to arrive, a storage pile can be made by unloading with the grab bucket and discharging at a convenient point in the vicinity of the derrick, and it is then a simple matter to grab up the materials and recharge the storage bins at any

time. It will be obvious that the use of the grab and derrick will be far cheaper and quicker than the old-fashioned method of hand shovelling, and on a large scheme the latter will also be incapable of dealing with the requisite amount of materials unless an exceptionally large and unwieldy force of men are engaged. The work of unloading is also likely to be somewhat intermittent, and it is not good practice to constantly draft large numbers of men from one section of the operations to another for short spells of work, as this involves loss of time and temporary disorganisation. When the aggregate is received by road transport it should be arranged for tipping wagons to be used, and the contents are then dumped near the derrick or conveyor for lifting to the storage bins. The third raw material, which will be Portland cement, should be unloaded directly from the trucks or wagons into the cement storage shed, which should be adjacent to the sidings and adjoining the platform around the mixer. All consignments should be arranged in the shed in a manner which will permit use in rotation, and the necessary samples for testing purposes should be taken immediately on receipt.

The storage bins for the aggregate above referred to can be constructed with large timbers and be elevated above the mixer to allow the materials to fall by gravity into the gauging hopper. The capacity of the bins will depend very much on the circumstances of the case, as a large scheme which has to be executed quickly with large capacity mixers

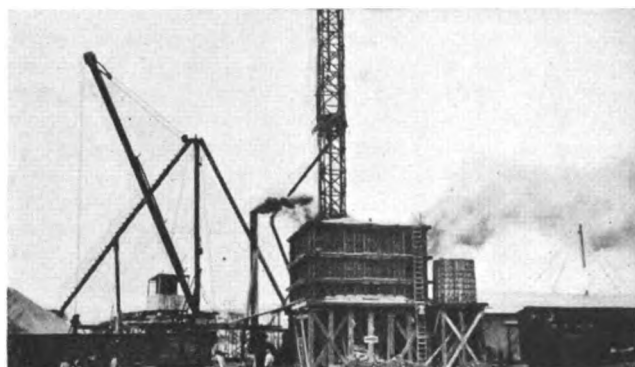


Fig. 143.

will demand a much larger bin than the medium size scheme with plenty of time. A typical installation for a large scheme is illustrated in fig. 143, where the storage bins can be clearly seen. The unloading derrick with grab is shown on the left side of the illustration, the storage bins in the centre, and the cement stores on the right. Adjacent to the storage bins on the right can be seen a storage tank for the mixing water, and this is an important feature in a well-arranged installation. The water supply on a construction scheme is usually of a temporary nature, and frequently small bore pipes only are used which are insufficient to cope with the demands that are made when the work is in full swing, and in consequence a variation in the pressure and flow of water is constantly occurring which affects the operations where speed is essential. Where no storage tank is provided it is not uncommon for the concrete mixing to be entirely held up by insufficient or no water at all, especially as it frequently becomes necessary to break the pipe lines for alterations and extensions as the work proceeds at different points, and such delays are serious, as they affect a large number of men engaged on the concreting operations. The storage tank will be supplied by a pipe line and controlled by a float or ball valve which will ensure the tank being kept full, and in the event of the supply going off or becoming reduced the tank will provide sufficient water to allow the operations to be carried on without delay, and during the rest periods the filling up will be automatically carried on, thus ensuring a full tank and a plentiful supply at the commencement. The storage tank will also ensure a constant and definite head of water, which will allow the filling up of the measuring tank on the mixer in a known time. The capacity of the bin for the aggregate shown in the illustration is about 350 cubic yards, the material consisting of ready-mixed gravel and sand; thus no division to separate the fine and coarse aggregate was necessary. The central

feature behind the storage bin is the concrete hoisting tower, which is mentioned later. With regard to the provision of a derrick and grab bucket for hoisting the aggregate, this may be considered by some as an expensive part of the equipment; but it must be borne in mind that it will only be necessary to provide one boiler to supply steam power for the operation of the mixer, derrick and hoisting of the tower bucket, and therefore the extra cost of operating the derrick will be very small, whereas the labour saving will be considerable.

The second stage in the operations was described as the gauging and mixing of the raw materials, and it will not be necessary to state how important this part of the operations is, because it will be obvious that the quality of the concrete will depend on the accuracy of the gauging and the efficiency of the mixing. The gauging can be done in two or three different ways, but it is important that the method adopted is a *practical* one—that is to say, one which does not involve a large amount of unnecessary measuring, handling and rehandling between the storage pile or bin and the mixer. In the past, when hand-mixed concrete was general, it was the practice to specify and insist on the use of specially made gauging boxes, which were arranged to give the correct ratios to the coarse aggregate, fine aggregate, and the cement; but this method is now obsolete, as with machine mixing the gauging boxes will necessitate the dumping of the materials into the boxes on a platform, and the rehandling to load the feeding hopper on the mixer when the measuring is complete. A method now commonly employed is the measuring by barrow-loads, which are wheeled up to the hopper and discharged directly into this, the charge for one mix being arranged to allow the use of a definite amount of Portland cement, such as one bag or half-bag, according to the capacity of the mixer being used. This method is open to objection, as a barrow-load is likely to be a variable quantity, and, again, it necessitates the handling of the materials in small quantities and the employment of a large number of men to keep a large capacity mixer fully supplied. The ideal method is the gauging of the materials in the receiving hopper itself, and this is possible, and, in fact, simple, when a storage bin as previously described is employed. The bin is provided with a hopper mouth directly over the gauging or feeding hopper on the concrete mixer, and a lever for the control, by opening and closing this mouth, is arranged close to the mixer to allow the operator to discharge a quantity of aggregate from the bin as required. When the correct proportions for the concrete are determined a gauge line should be marked on the inner surface of the feeding hopper, which will indicate to the operator when the correct amount of aggregate has been measured out for one charge, or a gauge stick can be fixed to the side of the hopper to give the same result. The charge should be arranged to allow the use of one or two bags of cement exactly, so that this material can be transported from the cement shed in the bags and be emptied directly into the receiving hopper. The quantity of water will be arranged by the regulation of the valve in the tank on the mixer; and if this is discharged by syphonic action, there will be no doubt about the full quantity of water being sent into the mixer. The actual mixing in the machine offers no difficulty in the case of a batch mixer, and the number of revolutions and the time required will quickly be judged by the operator if he is an experienced workman and the supervision at the commencement is rigid enough to make him understand that sufficient mixing is absolutely essential. The conditions with the continuous type of mixer are different, as the amount of mixing is determined by the speed at which the materials pass through the machine and the general arrangement of the mixing drum. The quality of the material in a continuous mixer will be dependent also on the continuity of the feeding, as a break in the supply of any one of the raw materials will obviously affect the proportions of the subsequent mixture. Some further remarks on the use of batch and continuous mixers will be given later, but, generally speaking, the author prefers the batch mixer as producing more reliable concrete under all ordinary conditions.

(To be continued.)

Royal Archæological Institute. Summer Meeting—I.

The summer meeting of the Royal Archæological Institute of Great Britain and Ireland was this year held at Ripon, under the presidency of the evergreen Sir Henry H. Howorth, K.C.I.E., D.C.L., F.R.S., F.S.A., the Grand Old Man of English archæologists.

Ripon stands on high ground near the confluence of the River Ure with the Laver and the Skell. In spite of its ancient pedigree, the city contains but few buildings of architectural interest, with the exception of the Minster. Its narrow, curved streets still retain names redolent of its more picturesque past—such as Bondgate, Priest Lane, Barefoot Street, Minster Road, Stonebridgegate—the termination “gate” enters into some eight or nine of them.

As a sort of *hors d'œuvre*, the proceedings opened on the evening of Wednesday, the 19th inst., with an official reception by the Mayor and Corporation of Ripon at the Town Hall. This building, which was erected in 1801 after an unambitious design by Wyatt, stands on the north side of a spacious Market Place, with its conspicuous obelisk erected to a Mr. Aislabie, who represented the borough for no less than sixty years. The appropriate atmosphere was created by a procession into the council chamber of the Corporation, attended by the ancient city constables bearing staves and resplendent in top hats, the city horn-blower and the bellman, both in quaint uniform. One of the most conspicuous things about Ripon is the city horn, which both appears heraldically as the local arms and has been sounded since 1598 at nine o'clock every night by the wakeman, who gives four blasts at the corners of the obelisk and three before the Mayor's residence. At one time every householder had to pay fourpence a year to the Vigiliarius or Wakeman, and double that sum if his premises possessed a back-door. In the event of any house or shop being broken open between the blowing of the horn and the rising of the sun, the loss had to be made good. Possibly it was some unfortunate Ripon wakeman who first introduced the inscription now over the Town Hall façade: “Except ye Lord keep ye Citty ye Wakeman waketh in vain,” which serves as the town's motto.

The Mayor in his address of welcome mentioned a curious custom connected with the mayoral election. This latter was carried out in the proposed candidate's absence; as soon as the choice was agreed upon, the proposer and seconder were told “To go and seek the Mayor.”

THURSDAY, JULY 20.

The serious business of the meeting began with a morning devoted to the Minster, under the guidance of Mr. A. Hamilton Thompson, M.A., F.S.A., Mr. John Bilson, F.S.A., F.R.I.B.A., and Mr. W. M. I'Anson, F.S.A.—all three notable authorities in their respective subjects. Assembling in a meadow to the south-east of the Minster, Mr. Hamilton Thompson gave an interesting account of its historical aspect. The first thing one heard about Ripon was, he said, the foundation of a monastery a little before 660 by Alchfrith, son of Oswiu, King of Northumbria. This monastery was given to the Abbot of Melrose, the tutor of the great St. Cuthbert. Abbot Eata brought here his Irish monks, who were instructed in the discipline of the Celtic Church. Soon afterwards the monastery was transferred by Alchfrith to his friend and protégé, the high-born Wilfrid. One of the first things the latter did was to ask the Irish monks to continue. But they declined, as he wanted them to abandon local customs of the Scottish or Irish Church and to adopt those of the Roman and Western Church. It is possible that Wilfrid, who was probably a deacon, certainly not yet in priest's orders, imposed upon their successors the Benedictine rule, which he had studied in Rome. Nothing, however, is definitely known about the character of the monastery. Mr. Hamilton Thompson was inclined to believe it formed one of those Saxon minsters in which the clergy were brought together to live a common life, but with no distinct rule. Something of the same kind of thing was introduced later for establishments of secular canons. Wilfrid built a church

about 670 (contemporary with the church of Monk Wearmouth), which was dedicated in the presence of the two Northumbrian kings. Three days of banquetting followed. Many splendid gifts were made, including from Wilfrid a beautiful copy of the Gospels in a golden case studded with gems. Wilfrid's career was an extraordinarily stormy one and extraordinarily difficult to arrange chronologically. After some years he was expelled from his monastery. A second time he quarrelled with the King of Northumbria. Two important synods were held in Northumbria, at the first of which it was decided that Wilfrid's jurisdiction should be limited to Ripon; but at the second he was allowed to retain Hexham also. Wilfrid died at his monastery of Oundle, in Northamptonshire, and was buried at Ripon in great magnificence. He must have been extremely difficult to work with. Nobly born himself, he treated kings and princes with little respect. He was held in high honour as a saint from the time of his death. But about the ninth century the offerings at his shrine had fallen away, and he became almost forgotten. In the first half of the tenth century King Athelstan, Alfred's grandson, came to Ripon, and granted the church many important privileges. His charter was still preserved, but probably only a fifteenth-century copy. If Athelstan was favourable to Ripon, his successor and brother, Eadred, was the opposite, for he seems to have destroyed the church and laid waste the land around it in 948. The body of Wilfrid was dishonoured, but was never removed. There arose in mediæval times a great dispute between the monks of Canterbury and Ripon as to which place held the remains. Canterbury claimed that most of the bones had been moved there, but on the other hand a persistent tradition stated that the entire body remained at Ripon. A contemporary anonymous biographer of Oswald (Archbishop of York 972-992) claims that that great reformer placed it in a more noble tomb here.

The Benedictine rule seems to have been introduced in Oswald's reign. If so, Mr. Hamilton Thompson did not believe the monks remained very long, for about that period there was a distinct decline in religious fervour. At the Conquest certainly there were no monks here. The Saxon archbishops seem to have left Ripon alone. The first Norman Archbishop, Thomas of Bayeux, found secular canons living at Ripon under the patronage of the Archbishops of York, and soon introduced the cathedral life to which he had been accustomed in France. He established at York a chapter and appointed prebends. It soon grew into an important body. At Ripon, where the number of canons never exceeded seven, the allotment of prebends is difficult to trace. In 1230 the Ripon chapter became complete in its final form. There was no dean, the head of the chapter being the precentor, the prebendary of Stanwick. Each canon had his vicar or representative. In 1303 these vicars were put on a more secure footing: a house was given them in Ripon, and six of them lived a common life. There were also seven or eight endowed chantries at the time of the Suppression. In 1414 the vicars were formed into a college, with a provost and a seal of their own. Consequently there was a college within a college, as at York. In 1547 the college was dissolved, its possessions surrendered to the Crown, and the Minster became simply a parish church. In Elizabeth's reign it was proposed to re-establish it. In 1604 the chapter was re-established, the government being put into the hands of a dean with six stall men or prebendaries. Under the revolutionary Church Act of 1836 Ripon was again made into a bishopric. The Archbishop of York was allowed into the church only on sufferance, for Ripon was independent of him, though the terms between the two were generally friendly.

After this historical sketch a move was next made by the party to the interior of the Minster, where Mr. John Bilson contributed a brief general sketch of the fabric, beginning with the basilica of Wilfrid. The characteristics of the crypt were, in his opinion, similar to Hexham and consistent with Wilfrid's period; he thought it might be taken for

granted that it was that prelate's work. Mr. Bilson suggested it would be an admirable thing to mark out on the floor of the church the exact line of the crypt below. One point he more than once protested against was the usual statement (repeated in the printed notices of the fabric hung up in the building) to the effect that the church was rebuilt for a third time after being destroyed by William the Conqueror, and that this was done by one of the Archbishops of York—perhaps by Thomas of Bayeux about 1080. There existed, he declared, no evidence whatever of any third church. Above ground no portion of the present structure is earlier than the twelfth century. The vestry and chapter house, south of the choir, are commonly regarded as belonging to the time of the earlier Norman Archbishops of York; but it seemed more likely they were part of a rebuilding by Archbishop Roger of Pont-l'Évêque (1154-1181), begun about 1175 and rapidly constructed. The two western bays of the choir, the transepts, and the fragments at the west end of the remarkable nave arcade marked this church at Ripon as being one of the supreme examples of that Northern type of highly refined Romanesque which developed into Gothic. It owed nothing to the typical Gothic country of the Isle de France, though it may have owed something to Angiers; but most of all it owed its character to the austere influence of the Cistercians, who threw architecture back from ornament to essential structure. There existed strong resemblances between Ripon and Roche Abbey—a Cistercian foundation of 1147. The Norman, having brought his own advanced Romanesque into this country, went on refining it, and Ripon shows how far he had advanced by the middle of the twelfth century. The broad influences seen here would seem to have come from York, and they afforded some of the most reticent and refined work in the country. At the close of the thirteenth century the east end of Roger's choir and its aisles was altered, and the great east window inserted. The Lady Chapel, now used as a library, was added above the building to the south of the choir during the next century. In the second half of the fifteenth century the central tower became unsafe, and the east and west sides were rebuilt, together with adjacent portions of the south transept and south choir arcade. The final reconstruction of the nave, the choir screen and the choir stalls date from the early sixteenth century. The mid-thirteenth century west front was highly restored by Sir Gilbert Scott.

Ripon Minster is singularly destitute of memorials. In the eastern aisle of the north transept stands an altar tomb with effigies, which Mr. W. I'Anson assigns to Sir Thomas Markenfield II., who died about 1425, and his wife. Usually they have been ascribed to a Sir John or a Sir Thomas Markenfield of the time of Edward III.; but Mr. I'Anson, working from the evidence of the armour, gives them the later date. There is also a later, much mutilated altar tomb bearing the effigies of the same man's great-grandson, which is much inferior to the other.

KIRBY HILL CHURCH.

This is not a large church or very striking at first sight, but it contains a considerable amount of pre-Conquest work. The greater part of the nave was considered by Mr. Hamilton Thompson to belong to an early period of Romanesque, either not long before or not long after the Norman Conquest. The tower was added after that event, the chancel being enlarged and a north aisle added during the twelfth century. The most interesting feature is the south doorway; the present entrance was made within an earlier doorway, of which part of the arch remains, and this superseded another, the eastern impost of which is still in position. The sculpture upon this stone is described as of early Anglian character, before the Danish invasion. It is concluded that a church existed here in the eighth or early ninth century, and that it was rebuilt shortly before the Conquest. The rectory was appropriated to the prior and Augustinian canons of Newburgh, and was sometimes served by them, though to do so was against their rule. Mr. Hamilton Thompson remarked that under such circumstances the monks usually evaded their collective

responsibility for the upkeep of the chancel, and left that duty to the individual rectors.

THE DEVIL'S ARROWS.

About a quarter of a mile from Boroughbridge are three great weather-scarred monoliths standing along a more or less straight line in two cornfields. Leland saw four stones in 1538. Camden records fifty years later that one had been pulled down in a vain hunt for treasure. The material is millstone grit, which is found about seven miles away across the River Nidd. Two are 22½ feet high and 18 feet in circumference, and the third 18 feet high and 22 feet in circumference. Lt.-Col. E. Kitson-Clark, F.S.A., who described them, thought that no significance could be attached to the fluting-like channels at their tops, which were probably solely due to weathering. He suggested that the stones might have served to mark a prehistoric route and the best crossing of the river below.

ALDBOROUGH.

This rambling village marks the site of a Roman town and, before that, the chief city of the Brigantes—the most important tribe in the North of Britain at the coming of the Romans. Of its history nothing definite is known. In A.D. 78 Agricola made York the capital of the North, in place of this Iseur, which, however, continued to be an important city. The fact that this site has been in continual occupation for all these centuries gives it a peculiar character, and must render one grateful that even as much remains as can now be traced. Leland alludes to "the tessellated pavements of Isurium" which have completely disappeared. Other examples are still to be found in cottages and out-buildings. In at least one case visitors can contrast the scientific hot air heating system of the Romans with the present unscientific open fire. A small museum contains a large number of Roman and other objects. The Roman walls enclosed a well-filled rectangular area of about 60 acres. The houses so far excavated—much remains to be done—seem to have been of the usual courtyard and corridor type. They were warmed with hypocausts, adorned with painted wall plaster and floored with elaborate mosaics. Seven pavements now remain *in situ* (three of which are part of the Basilica), five are preserved in the museum, and another is in a Leeds museum.

The fourteenth-century church is supposed to stand upon the site of a temple to Mercury, and includes in the north aisle a figure of that god in relief. In the same aisle is a much-quoted brass of William de Aldeburgh, circa 1360, which is one of the few made soon after the Black Death, and therefore possesses special value as recording the rapidly changing equipment of the period.

(To be continued.)

Royal Institute of British Architects.

The following are notes from the minutes of the Council meeting held on July 17.

R.I.B.A. Boards and Committees.—The Council adopted the report of the Selection and General Purposes Committee and appointed the various boards and committees of the R.I.B.A. for the year 1922-1923.

International Housing Congress at Rome, September, 1922.—Mr. G. Topham Forrest was appointed delegate of the R.I.B.A.

International Congress of Architects at Brussels, September, 1922.—Mr. Paul Waterhouse, P.R.I.B.A., and Mr. Edward P. Warren, F.R.I.B.A., were appointed delegates of the R.I.B.A.

Board of Architectural Education.

R.I.B.A. SPECIAL WAR EXAMINATION.

The Special War Examination will be held for the last time from December 11 to December 15, 1922, inclusive. Applications, accompanied by the necessary testimonies of study and entrance fees, must be submitted by November 4, 1922. Candidates who fail to satisfy the examiners in this examination will be required to take the ordinary examinations of the Royal Institute if they desire to qualify as candidates for the Associate-ship.

EVERARD J. HAYNES.

Secretary to the Board.

Mr. John Slater, Past Vice-President of the Royal Institute of British Architects and chairman of the Practice Standing Committee, has been appointed as the architect-member of the Tribunal, which, under the chairmanship of Sir Wm. Mackenzie, K.C., will have the deciding voice on any points on which the Conditions of Contract Conference are unable to agree.

Regulations for the Use of White Lead.

Draft of regulations for the use of white lead or sulphate of lead in paint, prepared in order to give effect to the Geneva Convention. The draft has been prepared by the Home Office in collaboration with the Painters' and Decorators' Industrial Joint Council of Great Britain.

DEFINITION.

In these regulations "lead paint" means any paint, filling or painters' material containing more than 2 per cent. of lead, expressed in terms of metallic lead when present as white lead or sulphate of lead.

DUTIES OF EMPLOYERS.

REGULATION I.—(a) White lead, sulphate of lead or products containing these pigments shall not be used in painting operations except in the form of paint or paste ready for use.

(b) Lead paint shall not be stored, transported or used otherwise than in receptacles legibly marked as containing lead paint. But this provision shall not apply to receptacles (i) for mixing paint for immediate application, (ii) for actual use at the place of painting.

REGULATION II.—Lead paint shall not be applied in the form of spray in the interior painting of buildings.

REGULATION III.—Surfaces painted with lead paint shall not be rubbed down or scraped by a dry process.

REGULATION IV.—(a) There shall be provided for the use of persons employed in filling or painting with lead paint a sufficient supply of water, soap, nailbrushes and towels, and at least one bucket or basin for every five persons so employed.

(b) Five minutes shall be allowed to each such person for washing before each mealtime and before leaving work.

REGULATION V.—Suitable arrangements shall be made to prevent clothing put off during working hours being soiled by lead paint. Where practicable, the accommodation so provided shall be outside the apartment in which painting is being carried on.

REGULATION VI.—Where the Chief Inspector of Factories gives notice to an employer that the incidence of lead poisoning among the painters employed by him is excessive, such employer shall make arrangements for all painters employed by him and coming into contact with lead paint to undergo periodic medical examination, in accordance with such conditions as the Chief Inspector may prescribe, by the certifying Factory Surgeon for the district, or by other duly qualified medical practitioner appointed by written certificate of the Chief Inspector of Factories.

REGULATION VII.—(a) The employer or contractor shall allow any of H.M. Inspectors of Factories to take at any time sufficient samples for analysis of any paint in use or mixed ready for use—

(b) Provided that the employer may at the time when the sample is taken, and on providing the necessary appliances, require the inspector to take, seal and deliver to him a duplicate sample.

(c) No analytical result shall be disclosed or published in any way except such as shall be necessary to establish a breach of these regulations.

REGULATION VIII.—(a) The employer shall give to each workman when he is engaged, and subsequently on the first pay-day in each year, a copy of the prescribed leaflet containing special health instructions as to the use of paint.

(b) A copy of these regulations shall be posted in the workshop, paint store and in any apartment in which the paints are mixed on all jobs on which more than twelve men are employed in painting operations.

DUTIES OF PERSONS EMPLOYED.

REGULATION IX.—Overalls shall be worn by working painters using lead paint during the whole of the working period, and shall be washed at least once a week.

REGULATION X.—Every painter coming into contact with lead paint shall carefully clean and wash his hands before each mealtime and before leaving work.

REGULATION XI.—All painters shall deposit their clothing put off during working hours so as to prevent it being soiled by lead paint.

REGULATION XII.—Every painter coming into contact with lead paint shall present himself at the appointed time for medical examination when so required by Regulation VI.

G.E.C. Electric Light Fittings in the New County Hall.

A large building such as the new County Hall must be equipped with electric light fittings which are not only efficient as lighting units, but are also in harmony with its architecture and decoration. The G.E.C. have manufactured a large number of fittings for the new County Hall, and these were all specially designed in the company's studio, in collaboration with the architect.

All these fittings have heavy cast bronze metalwork, and are equipped with various types of ornamental glassware.

The entrance hall in Block I may be considered as a typical example. Here cast bronze pendants with 20-inch diameter satin-finished glass bowls are provided for the main lighting.

Four massive torch fittings of simple yet dignified proportions were also provided for this hall. Each has four arms fitted with flambeau shades. The torch fittings are arranged for fixing to the mantelpiece.

The fittings designed for the lobbies of this entrance hall are somewhat unusual. Owing to low headroom, pendant fittings would foul the doors when the latter swung open. A special bronze ceiling fitting with shallow satin-finished glass dish was therefore designed, the top reflector with the lampholder being sunk into the roof.

The members' reading and refreshment rooms derive their main illumination from eight bowl fittings, each equipped with a 24-inch "Perlux" dish. The combination of this glass with the bronze mounts gives a most magnificent effect, which is not spoiled, as so frequently happens, by a view of the lampholder and lamp neck, these being hidden in these fittings by bronze tassels. Subsidiary lighting in these rooms is provided by 12 bronze wall brackets with octagonal backplates. Each has two arms carrying "Equiluxo" glass shades.

Two "Perlux" bowl fittings, 36 inches diameter, and eight wall brackets are provided for the two large committee rooms in Block I.

The wide use which is made of electricity for power and lighting purposes in the building has naturally necessitated a large scheme of cabling. The actual total length of the main cables is some 3½ miles, and the complete contract for their manufacture and supply was placed in the hands of the Pirelli-General Cable Works of Southampton, which undertaking is one of the associated companies of the General Electric Co.

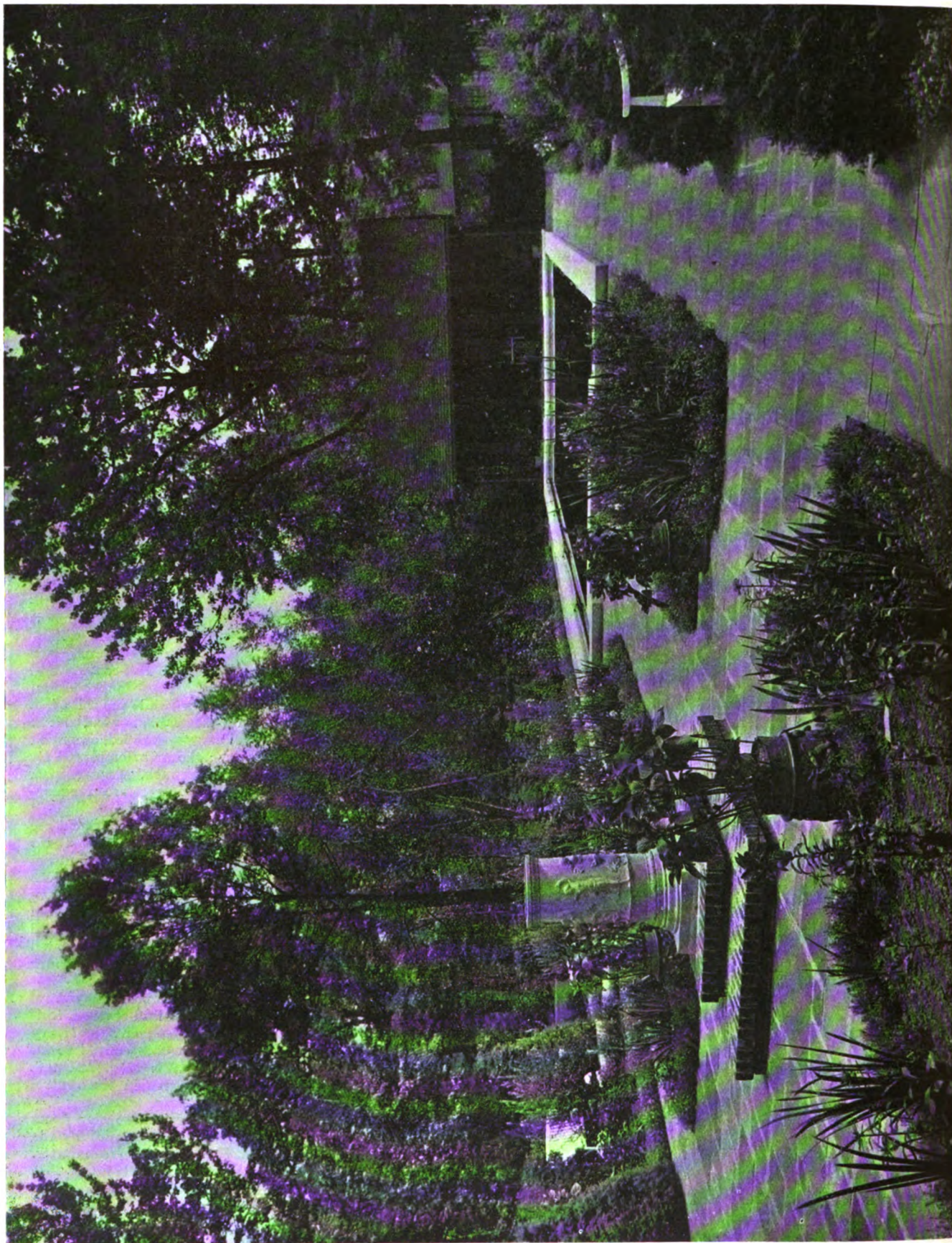
Three main classes of cables are used in the County Hall installation. The first is a paper-insulated lead-covered and steel-armoured cable; the second is also paper-insulated and lead-covered, but without steel armouring, while the third is a V.I.R. cable. In some cases a three-core cable is used, and in others twin-core. Various sectional areas are needed, according to the power the cable has to carry; the areas employed for three-core are .075 square inch, .12 square inch, .2 square inch, and .4 square inch. The areas for the twin-core are .1 square inch and .2 square inch.

The cables from the various switchboards in the basement are of the paper-insulated lead-covered type. They are led via trifurcating boxes towards the roof of the basement, and are carried parallel to the roof in the various necessary directions by supporting racks secured to the roof so that the cables have suitable clearance from the roof. These various sections of cabling radiate to points situated immediately below local control rooms. There are 110 such rooms, which are situated on the various floors and from which the lighting and power in the appropriate section of the building is controlled.

The basement cables terminate at the points below the control rooms just referred to. The paper-insulated lead-covered steel-armoured cables are jointed to them at these points, and carry the current to a main trifurcating box in each control room. From the trifurcating boxes V.I.R. cable is used, and this connects to the auxiliary distribution boards in the control room, from which the local lighting circuits are taken.

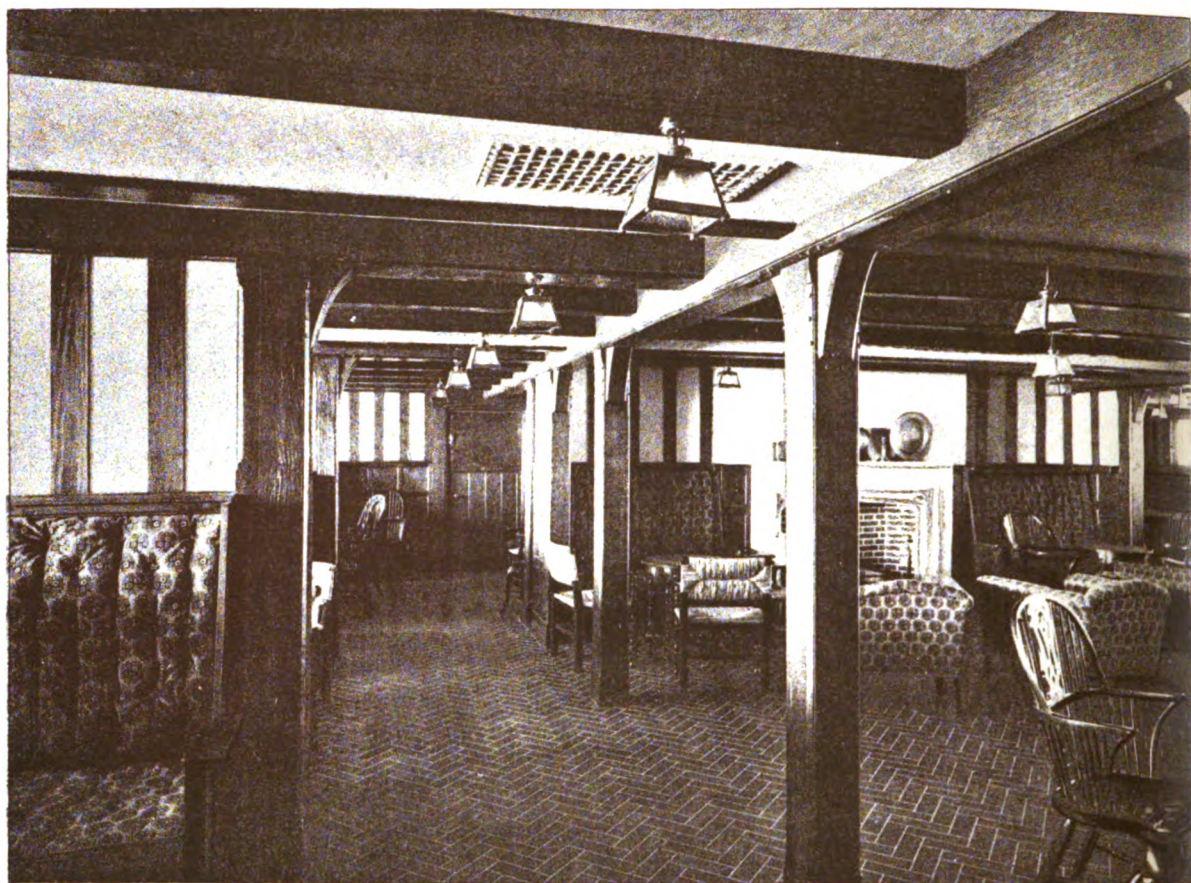
The whole of the lifts necessary for serving the nine floors of this new building were manufactured and installed by the Express Lift Company, of Greycoat Street Works, Westminster. There are in all three passenger and thirteen goods lifts. Two of the passenger lifts are high-speed, capable of dealing with loads of 24 cwt. at a speed of 250 feet per minute, and 20 cwt. at 300 feet per minute, respectively; the third passenger lift is designed for a 10-cwt. load at 150 feet per minute. Twelve of the goods lifts will take 1 cwt. at 100 feet per minute, and the remaining unit is for 15 cwt. at the same speed.

An interesting point in connection with the installation of the lifts is that one of the goods lifts was erected and in commission within seven days in order to meet urgent requirements by the L.C.C.



SWIMMING POOL IN GARDEN, NETHERWOOD, NEW JERSEY.

VITALE-BRINCKERHOFF & GIFFERT, Architects.



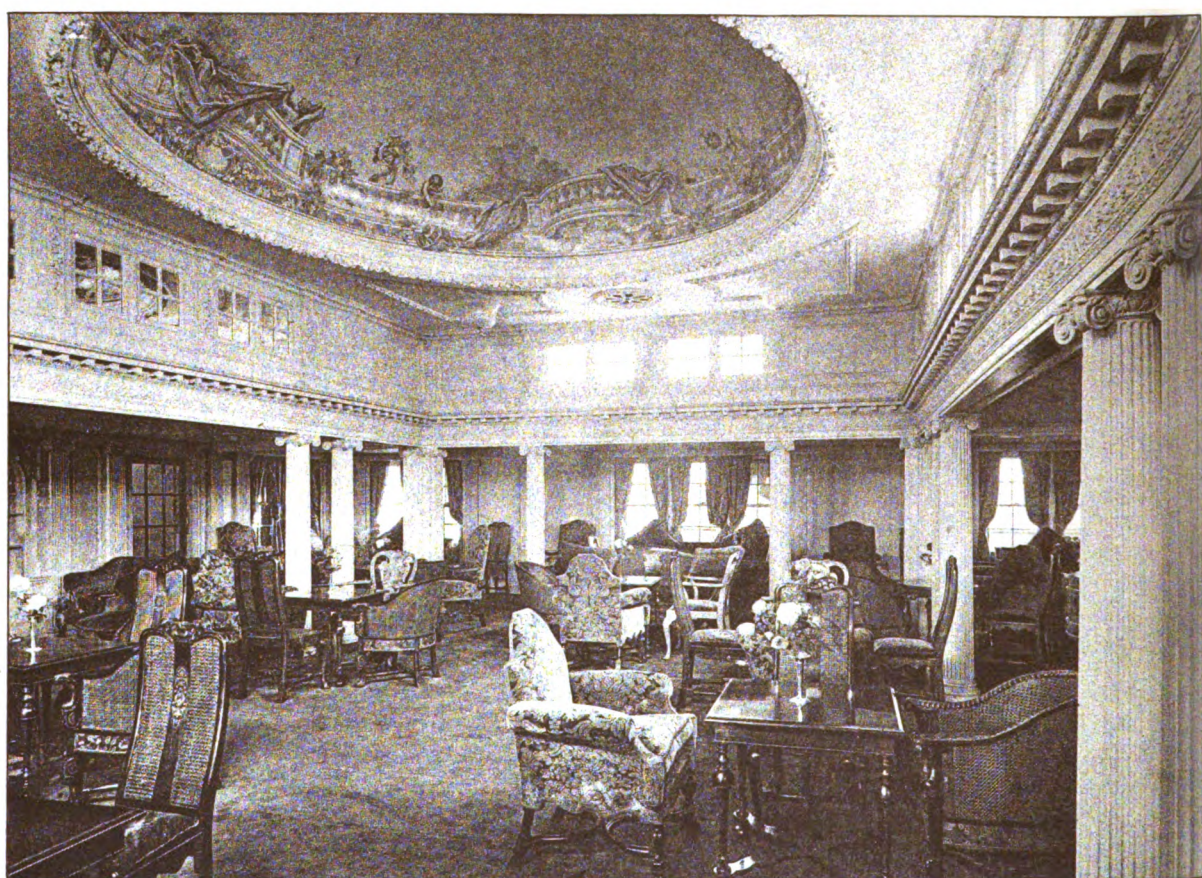
SECOND CLASS SMOKE ROOM.



FIRST CLASS SMOKE ROOM.



FIRST CLASS WRITING ROOM.



FIRST CLASS LOUNGE.

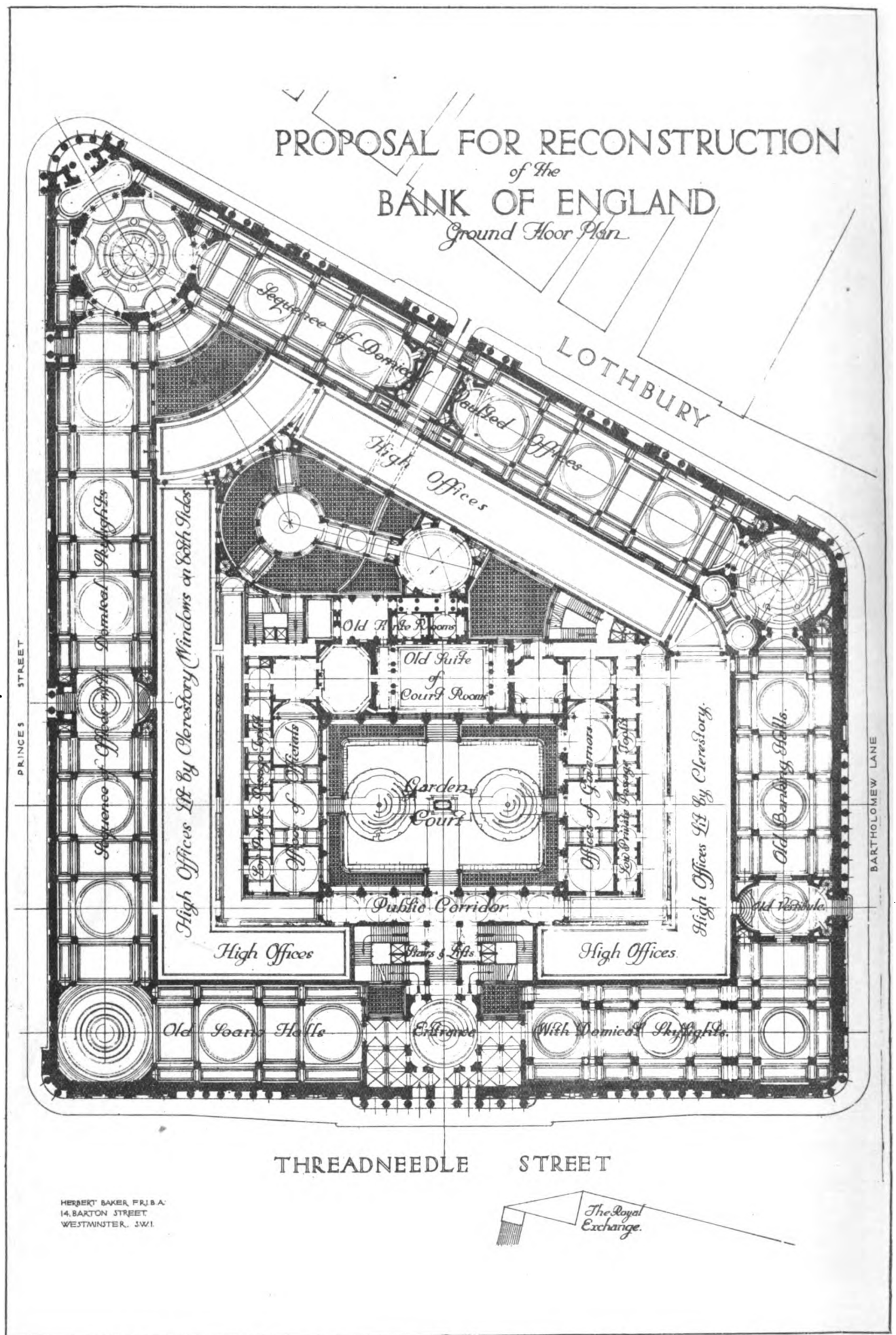


PHOTO LITHO. SPRAGUE HAYCOCK (PRINTERS) LTD 69 & 70, DEAN STREET, LONDON, W.1.

PROPOSAL FOR RECONSTRUCTION OF THE BANK OF ENGLAND.

HERBERT BAKER, F.R.I.B.A., ARCHITECT.

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BANK OF ENGLAND.

GROUND PLAN.
EXISTING BUILDING

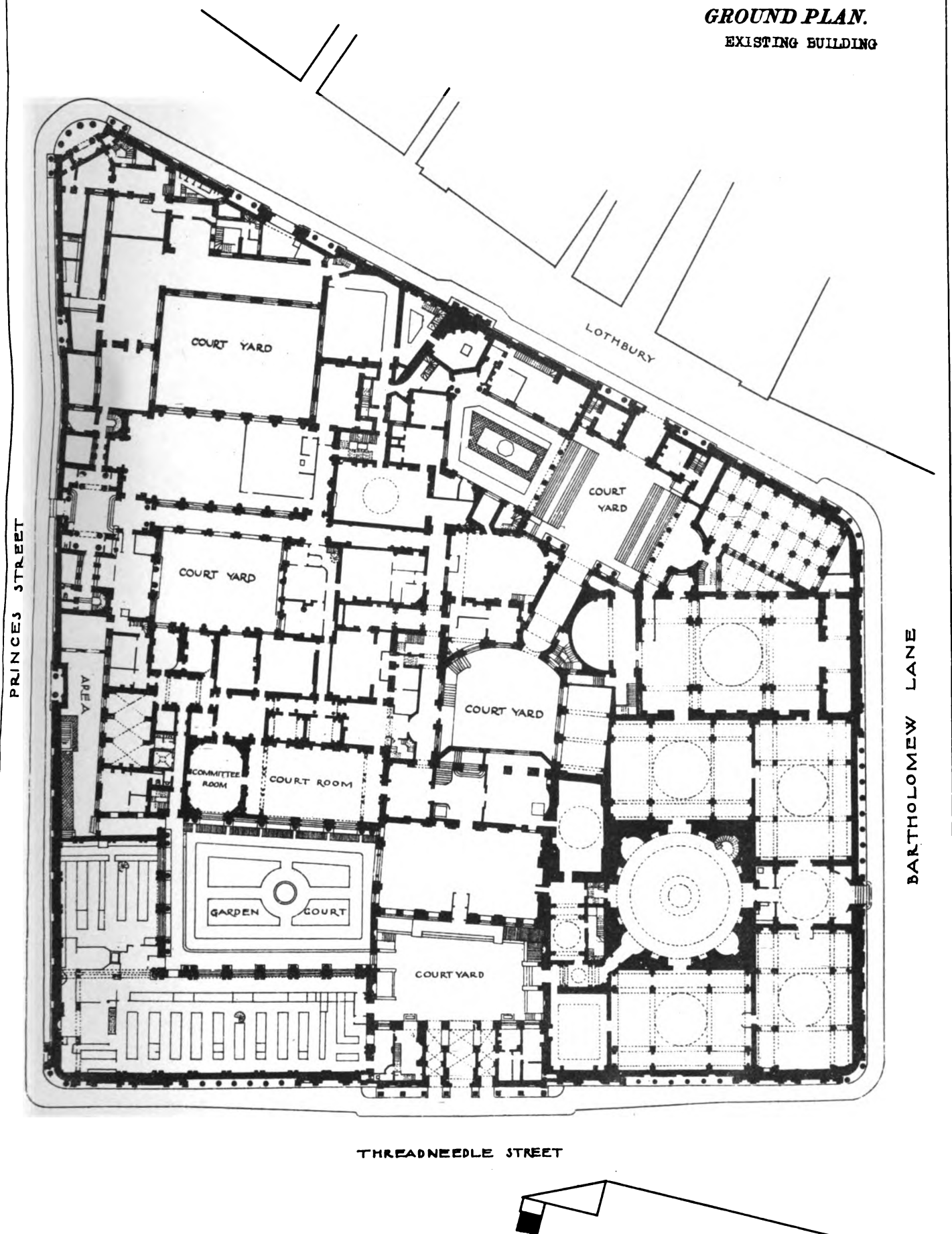
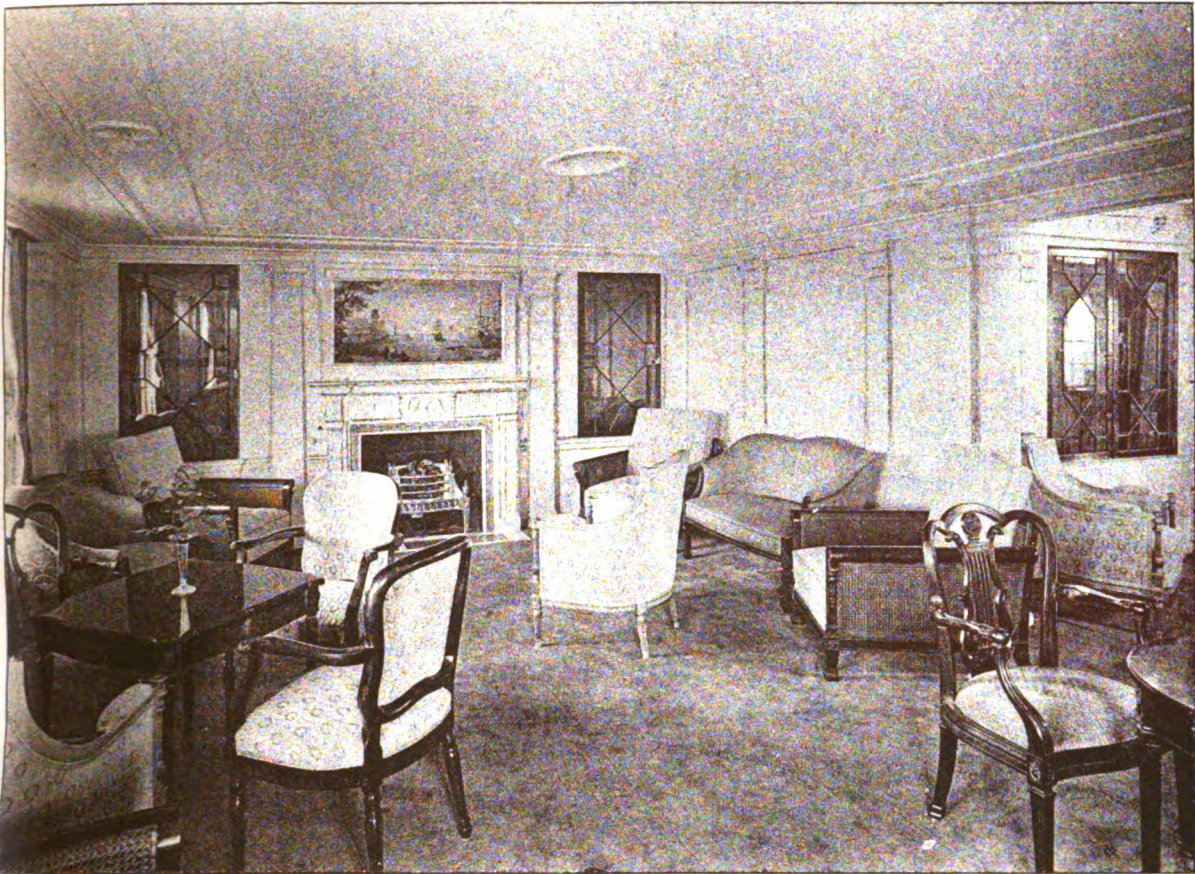


PHOTO-LITHO. SPRAGUE-HAYCOCK (PRINTERS) LTD 69 & 70, DEAN STREET, LONDON, W. 1.

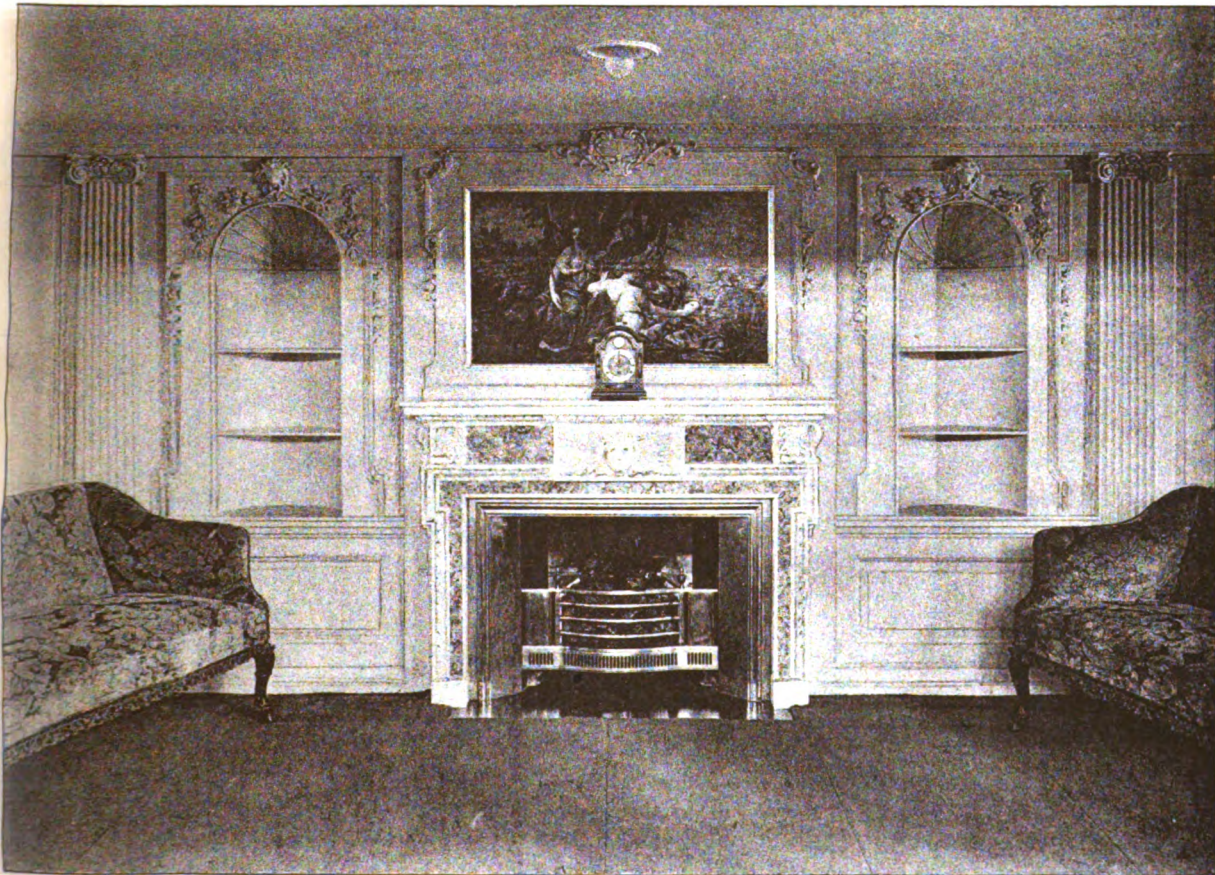
PROPOSAL FOR RECONSTRUCTION OF THE BANK OF ENGLAND.

HERBERT BAKER, F.R.I.B.A., ARCHITECT.



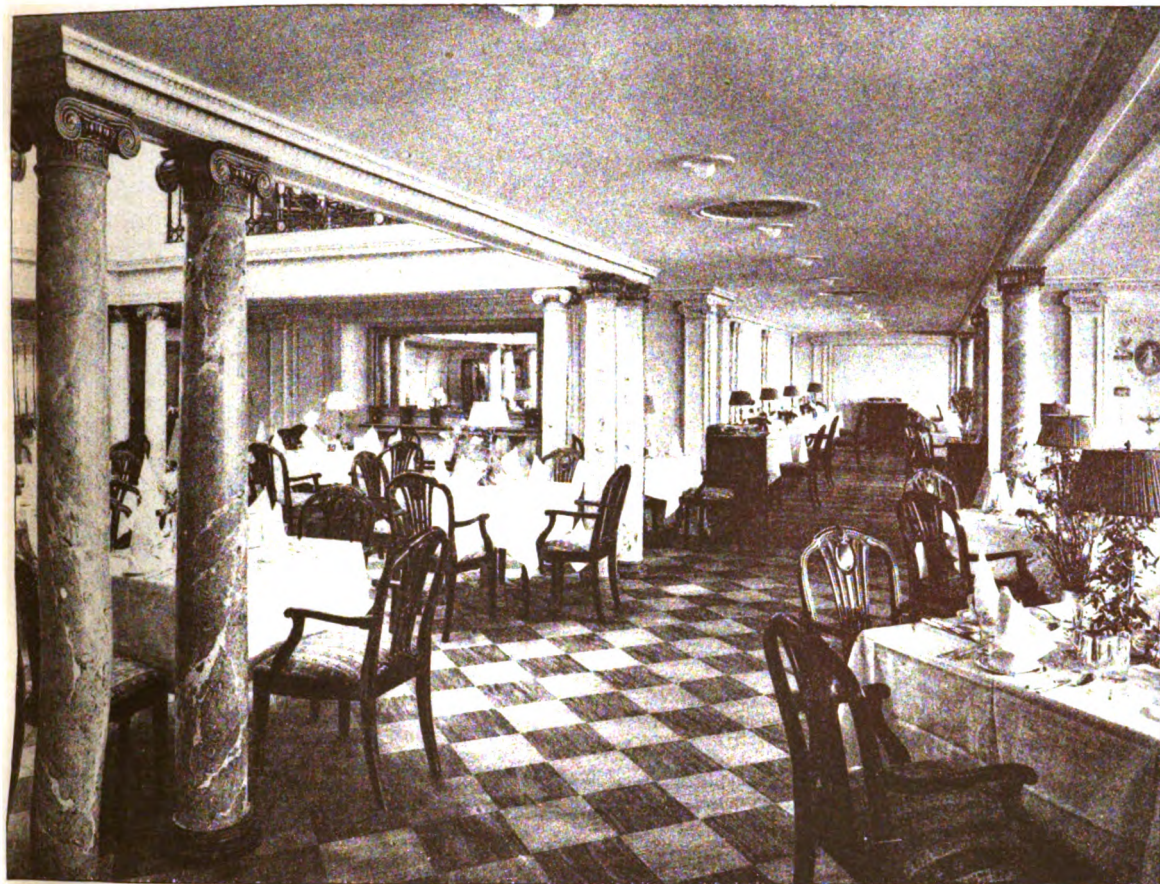


FIRST CLASS LIBRARY.



FIRST CLASS LOUNGE.

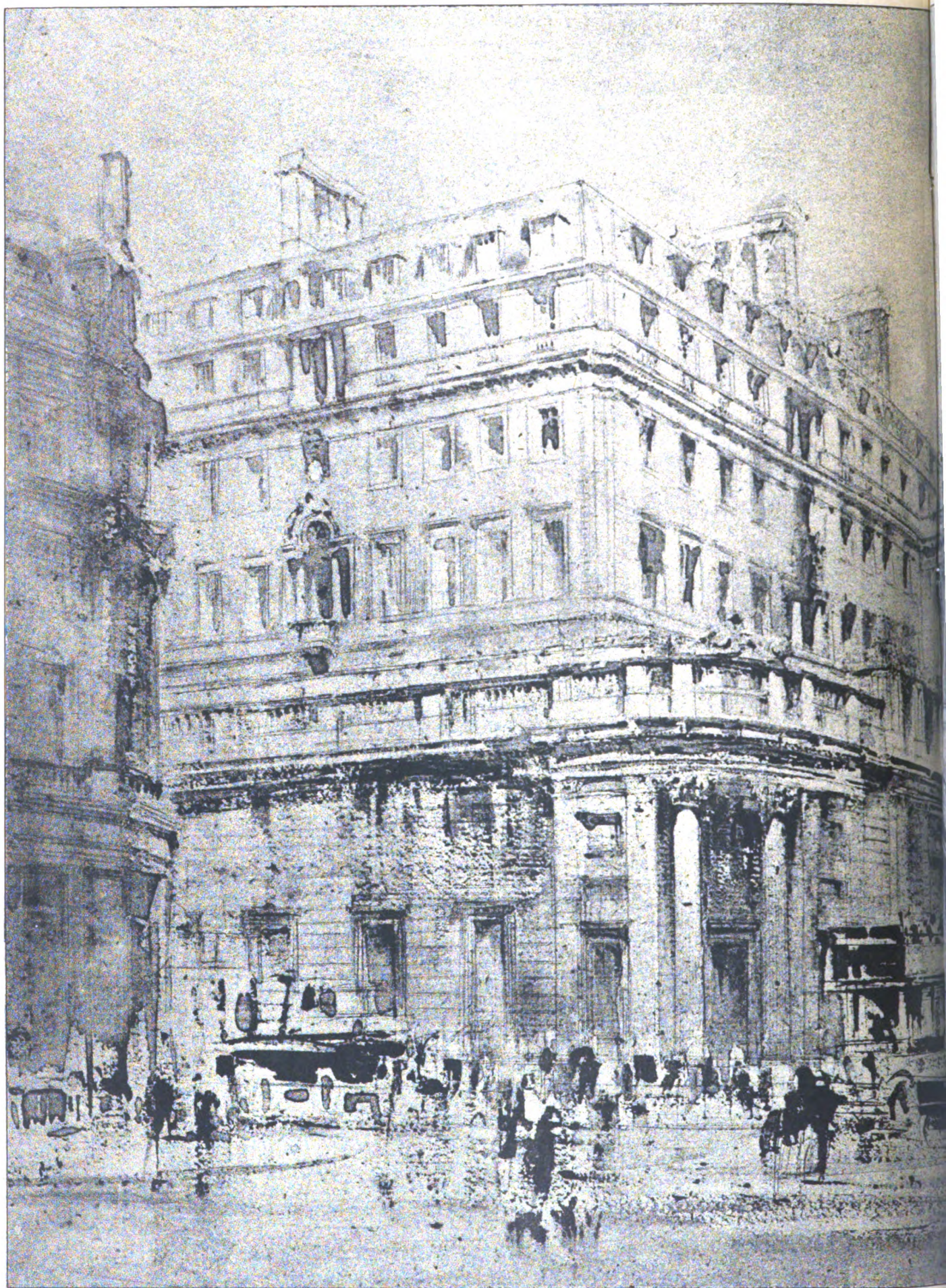
JULY 28th, 1922.



FIRST CLASS SALOON.



SECOND CLASS CABIN SALOON.

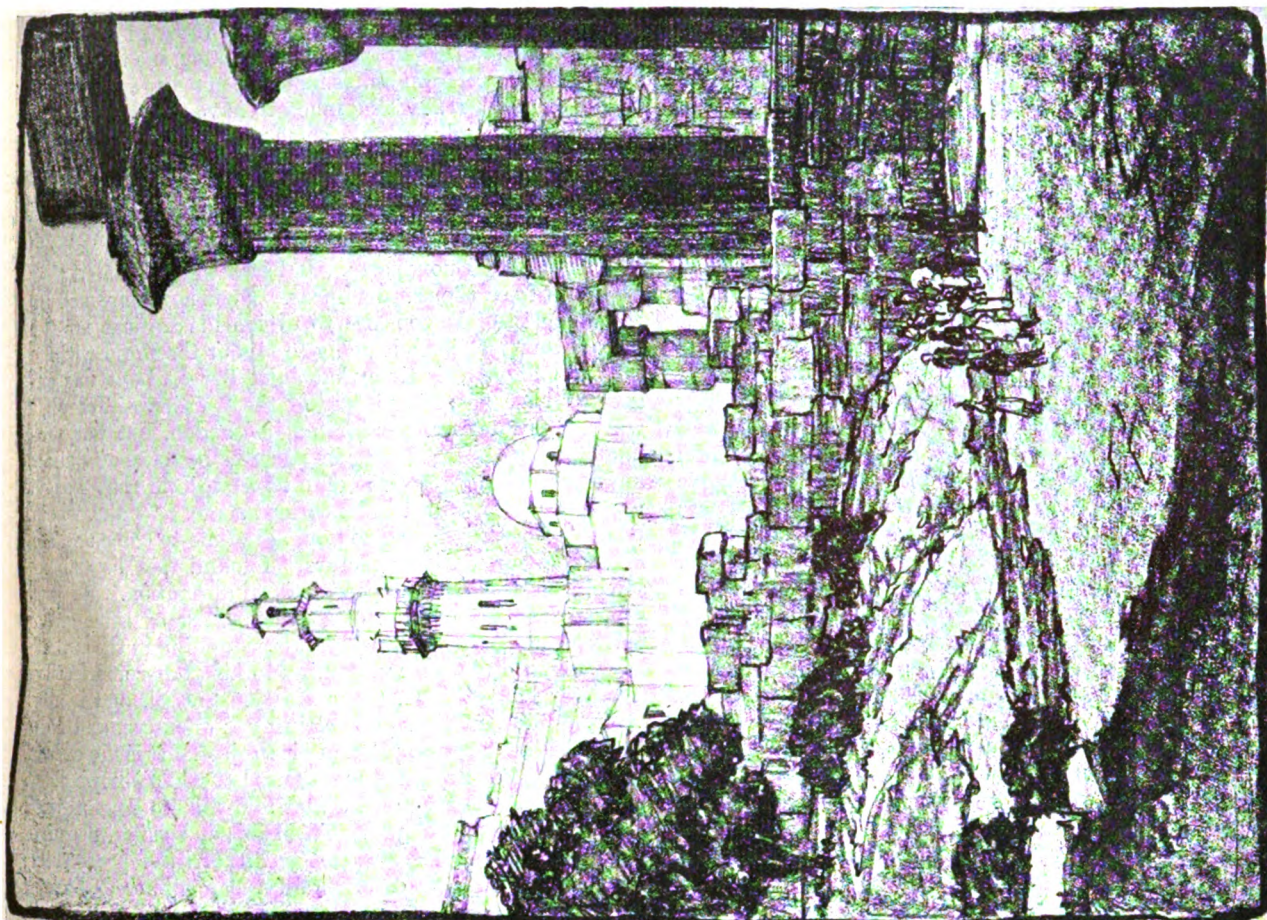


JULY 28th, 1922.

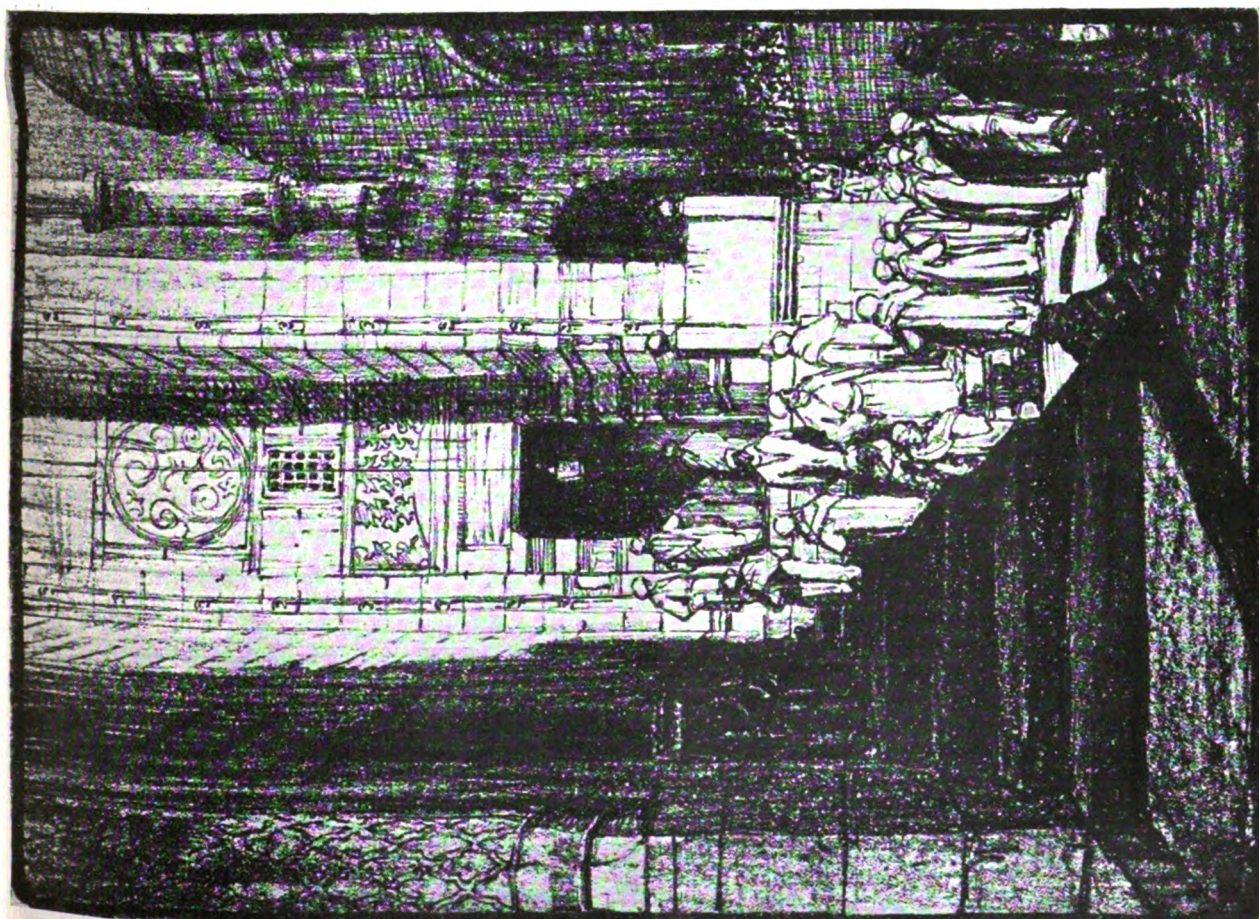


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ARCHITECT.



LUXOR, from a drawing by W. PALMER JONES, Architect.



A MOSQUE DOORWAY, CAIRO, from a drawing by W. PALMER JONES, Architect.

The Grand Tour of an Architect.—III.

By W. H. F. Basevi.

In the spring of 1817 George Basevi witnessed for the first time the Carnival festivities at Rome, and entered heartily into the amusements of the season. This interruption of his studies evidently disconcerted his father, to whose anxious remonstrances he replies:—

"You question whether I am improving in my profession? I think I can answer to your satisfaction. Even had I been idle I must have improved. Ideas would have crowded themselves upon one. But I have been as industrious as most people, perhaps more so, and very far from following the humours of others when it interfered with the object of my stay here. If I went to Tivoli it was because I thought I should learn something by it. The result proved the idea to be just. I gained more than I can well express. I am going a small tour again on Monday next with other draughtsmen to Albano, Preneste, and Cora, all within sixteen or seventeen miles of Rome. From these places, likewise, I shall, I am convinced, receive advantage. It is now more than two months since I was out of Rome. Every day except three or four during the Carnival has been devoted entirely to the same buildings. Though I am not as yet half master of the grand principles on which their excellence depends, yet I want relaxation and diversity of study. This diversity is to be found at Albano, Cora, etc., where there are remains of many buildings necessary to be studied, and then I shall again with more eagerness return to my first studies. It is impossible to sit down doggedly to study anything. I never could do anything with success methodically. One can only study with success when the mind is open and in humour to receive impressions." These last phrases may have been inspired by reading Sir Joshua Reynolds's "Twelfth Discourse," in which he says, "Whatever advantages method may have in dispatch of business (and there it certainly has many) I have but little confidence of its efficacy in acquiring excellence in any art whatever."

During this period, and, indeed, throughout the whole of his student days, his mind ever and again reverted to the difficulty of getting known. Skill and capacity by themselves are not sufficient; they need opportunity to make them fruitful; and it is only by becoming known that a young architect may hope to cross the path of opportunity. "Here one gets known more by what one can do than by introductions; for the rage of sketching, seeing drawings, etc., is so great that those who can afford amusement in this line are sure to be sought after. As yet I have little or nothing to make myself an interesting person. Of sketches fit for exhibition I have but few, as I make mostly studies of particular things of interest to me, but to no one else. Besides, sketching from nature was so novel to me when I first came here that I lost at least six weeks in acquiring facility. Day on day the more convinces me that drawing is the foundation of architecture. I now consider myself a match for most here, that is to say, gentlemen artists, of which there are many. As yet to rival in sketching an artist is impossible; besides it would occupy too much time, and distract me from more necessary pursuits. I now draw openly: before I drew covertly: I was shy of every stranger. So that at present I am frequently observed while drawing by many people, and, hearing that I am an architect studying here, they may wish to see what I have done; and then, little by little, I may—I say *may*—get introduced. But I am much of Fuseli's opinion, expressed to Mr. Lane as he quitted England, 'Trust to no connection you think you have made abroad. They will on their return to England forget all that passed beyond the Alps, and then you have nothing but your talents left to procure a livelihood, and to recall the faded impressions of those who once received pleasure in reviewing your early essays in a remote clime.'

Glimpses of old and new acquaintances appear scattered here and there among the letters written at this period. "Cockerell is apparently doing nothing but escorting Lady Dillon about the town. He is always with her; quite tacked to her apron." And again: "Cockerell must certainly be a

very clever man. Everybody speaks highly of him. All give him the praise of originality of thinking, and that everything that comes from him is moulded in a new and perhaps better form. I really long much to have the benefit of his acquaintance, and shall take some pains to that effect when I return from Albano. Mr. Kennard, the architect, who made such a disturbance about Mr. Soane's house, is here. I was introduced to him and to Mr. Eastlake this morning by Ahublad. Mr. Eastlake is the gentleman that painted the portrait of Buonaparte. It became so celebrated that he sold it for a thousand guineas. He is now employed by the Duchess of Devonshire to design illustrations for the Horace and Virgil she is going to favour the world with."

It was about this time that John Bryant Lane was engaged on his gigantic picture of the "Vision of Joseph," which was afterwards exhibited in London, but was pronounced a failure. During its progress he refused to allow anybody to see it; so it is of interest to hear that Basevi was consulted about it in its earliest stage. "Lane, whom I have before mentioned to you, asked me to come and see his sketch for his large picture. I found that he wanted some architectural and perspective information. He was right to ask the opinion of somebody, for by some great inattention all the back figures were standing in the air. I have engaged to go some evening to his atelier and rectify it all for him. He is in the Hayden School, and in my opinion much inferior. His colouring is offensive, and I do not much like his conception of his subject. It is the dream of Joseph. The Scripture mentions that while Joseph slept an angel appeared unto him and told him to depart with the infant Jesus to Egypt. This subject, I think, requires great repose, and it has always been hitherto so represented; but he, for the sake of originality, has supposed Joseph to be listening with a placid countenance to the angel, and a number of other figures frightened at its appearance."

But the matter to which Basevi attached the greatest importance was his meeting with Canova. "I called on Canova. I sent up my letter, and was told that he would speak to me directly, begging that I would amuse myself at his atelier. I was thus led round a suite of rooms filled with his works, mostly of a colossal size. At last I was ushered into a room to wait his coming, surrounded by his best works, perhaps not one less than 20 feet high. I really was quite intimidated. I wished myself in England. Suddenly the door opened, and the servant told me he was coming; my heart fluttered. Ten minutes more elapsed; the door then burst open again, and the servant exclaimed, "Eccolo!" and in he came. I was so overpowered that I could hardly summon up courage to meet him. I am sure if there had been any means of escape I should have seized it long ago. However, he soon put me at my ease by his unaffected manner. He promised to introduce me to the academy of St. Luke, to Sterne the architect, and Pozzi the painter, and begged me to call on him for the purpose next day at nine o'clock. After a little further conversation I took leave, full of admiration for this great man who could so condescend to take an interest in the studies of a young man. I called as appointed. He sent me an excuse for not being able to go with me, but gave me a letter, and desired his foreman to take me to the house of Pozzi. I was well received there, and two days after went with him to the academy. He took me over every part of it, and told me I was free to all the different departments. I have been there two or three times, but have deferred continuing till the heats commence, as then I shall not be able to sketch out of doors."

The impression which Canova had conveyed of being interested in the studies of a young stranger did not last very long. In the next letter Basevi writes: "I must tell you that my person is entirely forgotten by Canova, he sees so many. Every Englishman that comes here has letters to him, so that is no wonder. I was the other morning in his study, looking at his works, when he appeared. I bowed and addressed him. I saw he

had forgotten me, and endeavoured to bring myself to his mind by mentioning by whom I was introduced. He then pretended to recollect, but evidently did not, and asked if he could be of any service to me, that if I wanted anything in my profession he would be happy to assist me. I thanked him and told him I came to inquire after him and to learn and study at his atelier. He told me I was master to enter when I pleased. I shall go three or four times again, as then he will always remember me for the future."

Whether he carried out this resolution or not, Canova still failed to recognise his young visitor, whose admiration not unnaturally began to cool a little. For a few weeks later we read, "On Sunday last Church and I met the Miss Hamiltons at a painter's studio, where they offered to carry us with them to see the magazines of the unplaced statues at the Vatican. Canova was the conductor. He has entirely forgotten me! It is provoking that a number of other letters of recommendation should have driven mine quite out of his head. However, he is very civil, and offers to do anything for me, and gave me the other day a permit to study in the Vatican. As long as he grants me what I want, his personal acquaintance is of no use to me. I am acquainted, however, with his rival, Thorwaldsen. He is a modest man, and every bit as much good to the rising artists as Canova, but makes no parade of it. The King of Prussia wrote to both desiring to have designs sent him for a monument. Canova sent one immediately. Thorwaldsen enclosed a design of a young Prussian sculptor known to both, saying that there was at Rome a subject of his Majesty unknown to him, fully capable of executing the monument in the very first style. He had, therefore, taken the liberty of enclosing a design of his; but if his Majesty did not approve, and the competition still remained open to him, he would send in his idea. The Prussian artist's was approved in preference to Canova's. You will agree with me that a man capable of so exalted an action is likely to prove a more useful acquaintance than the other."

After a series of short visits to Albano, Frascati, and again to Tivoli, he returned to Rome and settled down to hard study, drawing all day and reading at night. Besides works directly or indirectly connected with his profession, he read much poetry—partly from natural inclination, partly to nourish and stimulate his imagination. Some remarks on Byron's poetry indicate how the average Englishman's detestation of the man obscured their judgment of his work:—

"I have just perused Lord Byron's Third Canto and Prisoner of Chillon. How he has lost himself; there is here little more than commonplace. The Prisoner of Chillon is downright nonsense. The dream or vision pleased me the most. I understand that he has taken a patriotic fit and gone to England to help his country in its distress. With what face he can appear in England I know not. I hope he will be driven back again by the silent contempt of all classes; for he is so fond of seeing his name in the journals that to be abused is preferable to not being mentioned."

"You ask me for some account of my studies. I can hardly give it to you: I have no exact method. If the day is fine I go out very early drawing, and continue at it the whole day. As I rise early, I give a little time before breakfast, which I take regularly at 8 o'clock, to reading. The evenings I divide between figure drawing and reading."

A week later, March 22, 1817, he writes, "On Sunday evening I drank tea with Mr. Woodford, a Royal Academician established here. We discoursed together much about Cockerell, who is no favourite of his. He thinks little or nothing of his abilities, and says that he merely is the reflection of his travelling companions, Stacleberg and Link, both exceedingly clever men, more especially the last. That he has derived much from them I have no doubt, but I cannot easily believe that he could have created so much sensation without talents. Lane, an English artist, lived in the same house with Cockerell

when he first arrived from Greece. He thinks even worse of him than Woodford: he says that being a good-looking fellow of elegant manners he has created a fashion for seeing his drawings which they are totally unworthy of. I know Cockerell has been making, these last two years, drawings to please and give to the ladies, and the more I hear of him the more I am convinced that I have no reason to fear him as a rival in the profession. Lane looking over my drawings the other night said they would surprise even Cockerell; that, though I wanted his practice, there was more head and meaning in them than in his. I hope he speaks sincerely, as I wish my mind to be seen in my work more than mere manual dexterity, which may be acquired by practice by any mechanical drudge. Every succeeding day convinces me that I should do wrong to sacrifice my time in forming connections; for, after all, merit will be the only thing that will eventually advance me."

(To be continued.)

Reinforced Concrete.

THE NEED FOR REFORM IN ITS ADMINISTRATION.

With the increasing use of reinforced concrete in building and engineering work there is happily a growing tendency amongst architects and engineers to follow an economically sounder procedure in the manner of its inclusion in schemes, and to eliminate the undesirable elements which have so long hindered its development upon the right lines. These evils, inevitable when reinforced concrete design was in its infancy but intolerable now that it is a recognised form of construction, are, (1) "Systems," (2) Competitive Designs, and (3) what, for want of a better name, may be called centralised designing.

The designation "system" as applied to a method of design or the material used therein has no longer the meaning which it once possessed, because the advances of the last few decades have resulted in a general levelling up in both method and material, and in the setting up of standards. It is to these standards that a design must conform, and this can best be assured by entrusting it to a competent engineer who must be prejudiced neither as to method nor material. A design upon one system is superior or inferior to a design upon another system (apart from the question of fitness) precisely to the extent that the individual designer of the one is more or less competent than the individual designer of the other. In the matter of fitness the better design is that in the preparation of which the consideration of local conditions has been the more thorough.

The principle of competition in design can only be justified when it aims at the advancement of knowledge or art, and unless it has this for its sole object it is utterly opposed to the traditions of the Architectural and Engineering professions. It may be urged that such high ideals have no place in an age of commercialism, but, even if we reluctantly admit this, competitive designing is still indefensible on the grounds of economy, for unsuccessful designs are not prepared without cost. It is only necessary to estimate the average number of designs submitted for each competitive scheme, or the proportion of successful to unsuccessful designs prepared by the competing firms in the course of a year to get an idea of the work put into these unsuccessful designs, the cost being borne, of course, by the successful ones. Could no better use be found for this misdirected energy? This brings us to the last and worst of these evils.

If a structure is to be erected in masonry or steelwork it is designed, down to the minutest detail, by an architect or engineer who, as an essential preliminary, makes himself acquainted with the site conditions and other local conditions affecting the cost and fitness of the work. If, however, it is to be erected in reinforced concrete the designer frequently does not even see the site, and the result is the familiar "assumption" of "data" which emphatically ought not to be the subject of conjecture in an engineering design. The proper course is for the architect or engineer either to employ an expert in his own office or to entrust the design to a specialist engineer who will deal with it on the spot, in the same way that the architect or engineer himself deals with the project as a whole. The designing fees should be included as an item of the Bill of Quantities just as the Quantity Surveyor's fees are included.

There can be little doubt that if reinforced concrete is to maintain its position as a recognised form of construction, and not fall into disrepute, it must be lifted out of the quasi-technical, quasi-commercial rut so far as design is concerned, and impartially directed for the use and convenience of man."

Smokeless Methods in Glasgow Housing Schemes.

Among the most interesting papers read at the Congress held this week by the Royal Sanitary Institute at Bournemouth was one by Councillor W. B. Smith, O.B.E., of Glasgow, on the above subject, and of which we give the following abstract:—

In May, 1914, the President of the Local Government Board, then Mr. Herbert Samuel, appointed a Departmental Committee:

“to consider the present state of the law with regard to the pollution of the air by smoke and other noxious vapours and its administration, and to advise what steps are desirable and practicable with a view to diminishing the evils still arising from such pollution.”

They held many meetings, and were taking evidence till war broke out, when their work was suspended.

In January, 1920, the Minister of Health (then Dr. Addison) reappointed this Committee, with instructions to consider and report, as quickly as possible, on the domestic smoke question, in view of the large number of dwelling houses to be built under the various housing schemes. Evidence was taken, and an interim report for the guidance of the Ministry and Local Authorities promoting housing schemes was presented to the Ministry and Parliament and published early in June, 1920.

In the final report, issued in November, 1921, the Departmental Committee said:

“In our Interim Report we mentioned a number of economical methods which are available for warming rooms, cooking, and the provision of hot water, which produce little or no smoke, which are hygienic and which save labour. We note with regret that the Ministry of Health have not required gas heating and other smokeless arrangements in the new houses erected under the housing schemes. We desire in this connection to draw attention to our recommendation in the Interim Report that ‘the Central Housing Authority should decline to sanction any housing scheme submitted by a Local Authority or Public Utility Society’ . . . unless specific provision is made in the plans for the adoption of smokeless methods.”

But what did Local Authorities do on their own initiative to instal smokeless methods in their new housing schemes?

The Corporation of Glasgow set out to build 57,000 houses. Up to date they have finished, or in process of building, 4,025.

All the houses are lit by electricity.

In every house a gas cooker and a gas wash boiler or copper are installed in the scullery, and gas piping is taken in one bedroom to the coal grate in case the occupier might want a gas fire installed there, but in the living-room a coal-burning register grate, fitted with a boiler at the back to supply hot water, and a coal-fire in each bedroom are provided.

The disadvantages of this arrangement are, that to get hot water, the occupier must light the living-room fire, even when the room does not require to be warmed; even in midsummer hot water is required for baths, washing dishes, etc., so a fire must be lighted, but there is no way of preventing the heat from the open fire coming into the room as well.

Had a modern form of coke boiler been provided, while heating the water it could be used as an open fire to warm the room, or in warm weather closed up so that much less heat would radiate into the room; and the coke boiler would entail far less labour than the register grate, as it might only require charging twice a day. Money would be saved, as coke is cheaper than coal.

Putting in a coal fire and leading a gas pipe to it is perpetuating the difficulty of adapting old conditions to new; it involves the cost of a fire-place, breast and chimney stack necessary for coal, the cost of removing the coal fire grate and fitting in the gas fire, and the disadvantage of the chimney not being as suitable and safe for gas as a proper gas fireplace and flue would be.

In a number of new houses, now occupied, there are complaints of smoky chimneys, generally in the house on

the top flat, where the chimneys are short and straight; during certain directions of the wind, also when the wind changes, smoke is blown back into the room. In most cases this is improved or prevented by putting on to the chimney a special iron “contracting” can, which by being narrower at the top reduces the area of the flue. But various kinds of additional chimney cans have to be used. It is sometimes found that when two chimneys are identical one form of can will be suitable for the one chimney, but for the duplicate chimney quite a different kind of can is required to prevent the smoke being blown about. These cost money and look unsightly.

I know one house where in neither of the two bedrooms could the fire be lit, as the smoke was blown down into the room. The coal fires had to be dispensed with and electric radiators put in; but as electricity had only been installed for lighting, no plugs had been provided, and they had to be put in, too.

In one area where there is a group of 126 houses that have only been occupied for about one year, already in fifteen the occupiers have had electric cookers installed, although they have to pay for them a rent of £2 per year and 1d. per unit for the current used. In other cases quite a number have had gas fires put into the bedrooms, not only in one bedroom where a gas pipe was led to the fireplace, but in many cases into the other bedroom which has no provision for gas, where the floorboards had to be lifted and the walls broken through to instal the gas fire.

In April, 1921, the Electricity Department made a suggestion for two groups of houses, 458 houses in Craigton area and 1,502 in Mossspark area, that one area should be all electric and the other all gas. The Gas Department approved of this scheme.

In every house there would be in the living-room the coal-fired register grate with boiler as provided in all the houses in other areas, to warm the living-room and provide the general hot-water supply.

In the electric group house there would be an electric cooker, wash boiler, kettle, radiator for parlour and two radiators for three bedrooms. The cost of this installation would be about £13 more than the equipment of the usual type of house, but the saving in the construction of the building owing to absence of fireplaces, chimneys, etc., would be about £40, a net saving in capital outlay of £27.

The occupier of a five-apartment house was to pay a fixed charge of £5 4s. per annum, plus one halfpenny per unit for all current used, including that for lighting, estimated to average about 3,500 units per annum, just a little under a flat rate of one penny per unit.

In the gas group house there would be a cooker, wash boiler, fires in every room, a hot-water circulator (as auxiliary to the coal-fired grate boiler) and one point for an iron. The lighting would be done by gas. The extra cost of this installation would be about £10, but that could have been saved in the building construction cost.

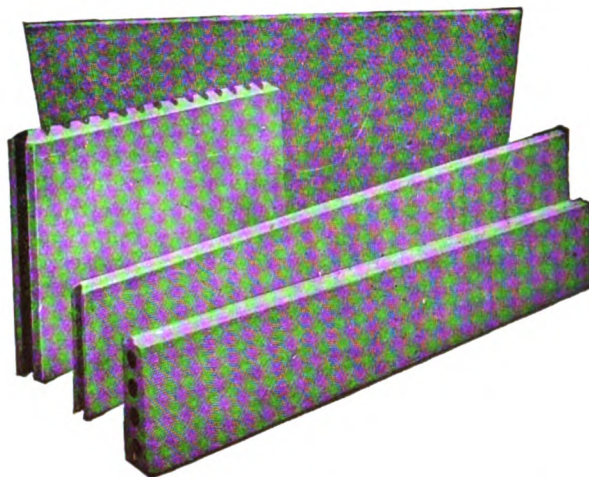
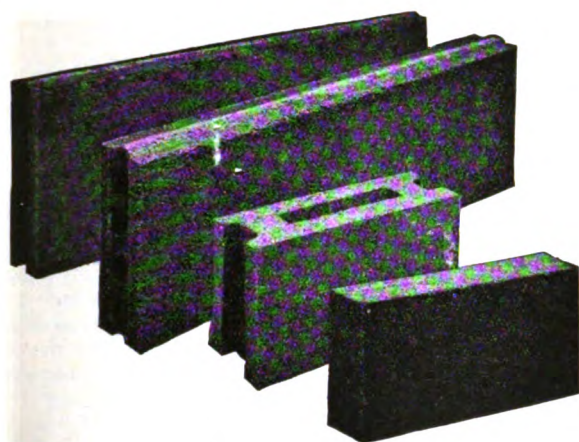
But the Housing Committee refused to adopt either scheme, and are putting in electric mains for lighting and gas mains for cooking through 7½ miles of streets in the Mossspark area alone, where there are only 10 to 12 houses per acre, and they are paying the Gas Department a subsidy of £20,000 and the Electricity Department £10,000 towards their capital outlay on mains, because the revenue would not pay the interest, etc., on two sets of mains, one for gas and the other for electricity to each house. I give this as an example of what all Housing Authorities ought to avoid.

I hope that some of the delegates present will tell us what has been done by the Housing Authorities they are connected with.

What I suggest now as one model scheme for a new housing area would be to have in each house one of the new-type boilers, burning coke, capable of being used as a closed-up or open fire at will, to warm the living-room and to supply the hot water required for all purposes except cooking.

The flue from this boiler should not be of so large a

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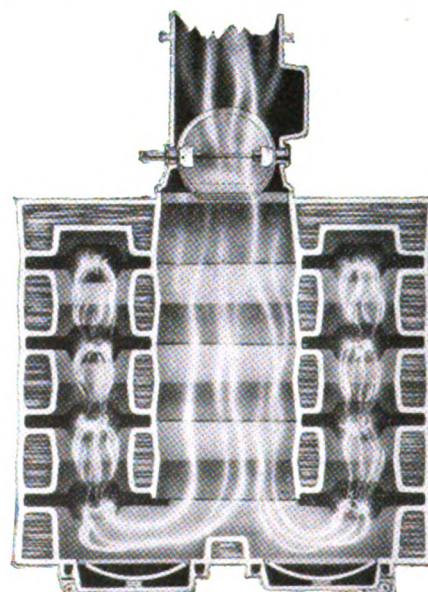
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diameter as the flues and chimneys usually put in for ordinary coal grates, as the better draught makes this unnecessary, and a flue not any wider than actually required is less liable to down-draughts.

A wash-boiler in the scullery, set just through the wall and back to back with the coke boiler, supplied with hot water from this boiler, and with a gas burner under it to raise the hot water up to boiling point when required, the flue from it going into the flue of the boiler. In the scullery also a gas cooker, provided with a canopy and pipe into the boiler flue to carry off all products of combustion, both from the oven and boiling rings.

In each bedroom there should be a good single gas fire, with a flue of long, narrow section in the special bricks forming part of the wall, opening out to the air under the eaves. This brick should also carry a ventilating flue. This would save money in construction, being cheaper than the deeper fireplace and wider chimney and chimney-stack and cans. The lighting would also be done by gas.

Another scheme would be the same for the living-room and hot-water supply, but the cooker and wash-boiler would be heated electrically, and an electric radiator would be provided in each bedroom, or a plug provided in each room to which a radiator could be connected. This would also be cheaper in construction, as only the one flue and chimney—for the coke boiler—would be required. A simple form of ventilator would be advisable, as open windows sometimes might not be available in very stormy weather.

The choice of gas or electricity for an area would depend on local conditions of supply, or what was expected to be most in demand.

In some places the individual-unit central-heating system might be preferred, such as the Departmental Committee saw at the Austin Motor Co.'s village.

In blocks of tenements, where a large number of houses are within a small area, a supply of hot water from a central source should be quite economical, and would certainly be most convenient for the occupier of the house. Used also to warm the house, and with gas or electricity for cooking, the work of the house would be reduced to the ultimate minimum.

In my opinion, these methods are more economical than the use of raw coal, both directly and indirectly.

In a house, of all the methods available for heating water, a coke boiler is cheapest. The heat of combustion is in direct contact with the surface of the boiler, and there is no soot deposited on to the boiler to diminish conductivity of heat. Then the fact that gas and electricity need not be turned on till the heat is actually required, and turned off when it is not required, makes their cost compare favourably with a coal fire, which often has to be lit long before it is required and remain in long after it is done with.

Therefore, although coal may cost less per therm (i.e., may contain more B.Th.U.'s in a shilling's worth), yet in its application the loss of B.Th.U.'s is so great, so small a proportion of them is actually effectively applied to the work being done, that the loss of heat outweighs the apparently lower cost.

In the case of gas, although it costs more per therm, there is less loss, especially in roasting and baking, as the combustion takes place in the oven itself, and, in the case of electricity, not only is the heat released in the oven, but the oven itself is sealed up so that the heat loss is extremely small, and the loss of weight of food by evaporation is much less than in a coal-heated oven.

We have been drifting long enough. Now that we have ample means of preventing smoke from domestic chimneys, local authorities who are providing houses must give a definite lead to the people by providing what is right for the health of the community. A little experience of the labour-saving of all smokeless methods will soon make houses with the old-fashioned, dirty and troublesome coal-fire unpopular.

Just as every housewife prefers to have water led into the house and to get it by merely turning on a tap, instead of having to go out to the yard and pump it up, as her grandmother used to do, so she will prefer to get heat for

warming and cooking by turning a tap or touching a switch in preference to carrying in coal, building and lighting a fire, putting on coal and poking the ashes out many times during the day and evening and taking out the ashes and cleaning the grate every morning, with a visit from the chimney sweep at frequent intervals, and all the trouble and mess that entails.

New Catalogues.

Messrs. Fredk. Braby and Co., Ltd., Petershill Road, Glasgow, have recently brought out new catalogues dealing with four departments of their wide range of manufactures—viz., steel storage bins and furniture, steel puttyless rooflights, steel buildings, and steel tanks. This firm are, of course, thoroughly equipped to produce work of the highest class. Their tankshops, for instance, are among the largest in the country; their own rolling mills are alongside, and their own galvanising department adjoins. They can claim, with truth, that there is no phase of steelplate work which they have not successfully tackled or are not prepared to undertake. The firm have had some difficult structural steelwork contracts to carry through, and the catalogue dealing with this section contains most interesting photographs. The latter pages of the booklet illustrate their "Unit System" of construction. In this system standard triangular units and standard connecting bars are employed. These units are capable of being combined by means of pin joints to form any required span and cross section. It is of some historical interest to learn that the first corrugated rooflights were invented and produced at the company's "Eclipse" works in Glasgow. Since that time there have been improvements made from time to time, so that they still remain in the forefront.

Cabot's "Quilt," the scientific sound deadener and heat insulator, has been made the subject of a commendably thorough trade publication by Building Products, Ltd., of 44-46 King's Road, Sloane Square, S.W. The material comes to us from the United States, where it long enjoyed the very highest reputation before it began to be appreciated in this country. That it has now secured a firm footing in this country is indicated by the list of our educational buildings in which the "Quilt" has been used. "Quilt" is a felted matting of cured eelgrass stitched with strong thread, securely fastened between two layers of exceedingly strong, tough "Kraft" paper. The eelgrass fibres are long and flat, and cross each other at every angle, as shown in the illustration. This makes a thick, elastic cushion filled with dead-air spaces, and dead air is a most perfect non-conductor of heat and sound. Its efficiency was most convincingly demonstrated to many hundreds of visitors to the recent Building Trades Exhibition, where a room sound-deadened with the Quilt, which had been erected by Building Products, Ltd., proved to be one of the most attractive popular features, and even attracted widespread attention in the lay press. The present booklet contains a very great deal of interesting matter; not the least useful portion of it being the double-page set of diagrams in the centre illustrating a few of the methods of use which have proved especially satisfactory.

Trade Notes.

Messrs. Samuel Haskins and Brothers, Ltd., have removed their offices and works to Black Horse Lane, Walthamstow, owing to the great expansion of their business. These new works cover upwards of three acres and are fully equipped with the latest electrically-driven machinery. The firm's telephone number is: Walthamstow 1050. Messrs. Haskins are still occupying their premises in Old Street, E.C., where they have been for the past one hundred years, for temporary showroom and City offices.

Messrs. George Mills & Co., Ltd., Globe Iron Works, Radcliffe, near Manchester, have received the following from Thos. Catlow, Ltd., Thornybank Mills, Burnley:—"We have great pleasure in testifying as to the ability of your sprinklers. The first warning we had was the fire-bell ringing, and we found the fire to be in the heald and reed room. Owing to dense smoke from the varnish on the healds it was impossible to approach the seat of the fire, and but for your 'Titan' Sprinklers the whole place would have been burned to the ground."

The Shepherd's Bush Exhibition Estate, London, W., is now offered for sale by private treaty as suitable either for international exhibitions or as a ready-made manufacturing city for an enterprising firm. The site covers 100 acres, and there are 35,000,000 cubic feet of buildings, all now being repaired. Offers should be made to the Secretary, Estates Department, Shepherd's Bush Exhibition, Ltd., Wood Lane, W.12.



AUSTRALIA HOUSE.
A. Marshall Mackenzie & Son, F.F.R., I.B.A.
Architects.

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The Royal Sanitary Institute.

The Thirty-third Congress of the Royal Sanitary Institute was held at Bournemouth from July 24 to July 29.

In Section B.—“Engineering and Architecture”—the following Presidential Address was given by Sir Henry Tanner, C.B., I.S.O., F.R.I.B.A. (Vice-President):—

The Council has for the second time honoured me by appointing me President of this section of the Congress. On the first occasion the Congress was held at Cardiff in 1908, and in my address I dealt chiefly with the introduction of reinforced concrete as a means of providing economical buildings, and during the period which has since elapsed, the use of reinforced concrete has been much extended; and when it is remembered that this form of construction was only introduced into this country 25 years ago, it will be realised what this extension means. Only one system was then introduced, namely, that of Messrs. Hennebique, represented by the late Mr. Monchel. This firm was followed in 1906 and later by other firms, and now the persons engaged in this form of construction are very numerous, while there are many building firms who are competent to carry out works of this description. In London regulations have been prepared and approved, and these probably form the basis of such building generally in this country, but before these regulations were approved in 1909 it was only possible to construct floors, unless the buildings or constructions were erected by bodies who were exempt from control or local authorities. The increase in the cost of materials required, and particularly of the timber needed for moulds, has, during the later period of the war and since, prevented progress, but it was found eminently suitable for buildings required for purposes connected with the war. Experience, however, appears to show that while it is economical for general purposes of construction, it is not altogether suitable for walling, bricks being still found the most ready and convenient material for such purposes. For engineering works, however, it has largely taken the place of other forms of construction, being found economical in first cost, very lasting, notwithstanding the limitation in the terms allowed for repayment of loans, whilst repairs are practically nil.

We have, however, four papers to discuss this morning, and it is not desirable that I should occupy too much of your time; but there are several subjects to which I wish to draw attention.

The first of these is Research. As you are no doubt aware, there has existed for rather over 20 years a Committee termed the British Fire Prevention Committee, which has done much useful work in testing on regular lines various materials, both manufactured and otherwise, and the results obtained were regularly published. With the death of Mr. Sachs this Committee practically ceased to exist for various reasons, mainly for want of funds and a directing mind which could give continuous attention to business. The cessation of the activities of this Committee is, I consider, a great misfortune. This is one phase of research, but there are others, and continually recurring examples where it is required in connection with materials, construction, etc., needed for building and engineering. One would have thought that the Fire Insurance Committee would have supported such an institution as the British Fire Prevention Committee, but although the Companies' Surveyors and others frequently attended the testing, they gave no help. I understand, however, that the companies are meditating the establishment of a station in the neighbourhood of Manchester. The Government Research Department has acquired a site and provided a building with some appliances, but how far this will meet the requirements of the building profession it is impossible to say. The Engineering Standardising Committee has done much in some directions. What is wanted, however, is some central and independent institution not relying on casual subscribers, but to which manufacturers and others can submit their productions to test at reasonable charges, the results being published and easily obtainable at moderate cost. A paper was read at the Royal Institute

of British Architects a short time ago by Mr. Munby, in which he drew attention to the great need there was in this direction, and he drew up an extensive list of directions in which research was required or desirable. For instance, paint affords an extensive field for research, for opinions are varied and opposite as regards the constituents of paint with a view to resisting various weather conditions, and perhaps experiments by some institution above suspicion might go some way towards arriving at definite results and which would be superior to any obstruction by trade interests. Some such institution exists in America, and it seems extraordinary that we cannot have similar State help in this country for so large and important an industry as building.

Housing in its several phases has found an important item or items in our programme of recent years. Cost has of course come to be the dominating factor in the provision of new houses, and not the production of new houses whatever the cost, and at the present time the cost is about half, or perhaps less, than it was a year or eighteen months ago. This raises the hope that in course of perhaps a short time the cost of house building may be such that they may be provided in the usual course of business and without the aid of grants of any sort, and probably local authorities may find it to advantage to cut losses and sell houses at their ordinary commercial value. Any revival of house building cannot, however, be expected to take place so long as the Restriction of Rents Act continues in operation.

The papers to be read this morning are more or less connected with Housing. The question of by-laws to be raised by Mr. Searles-Wood requires to be dealt with in a comprehensive way and not by way of a temporary extension of the modification allowed in connection with housing.

All by-laws and building regulations become antiquated in course of time, and they should therefore be revised at intervals. The model by-laws issued from the Ministry of Health should be brought up to date at short intervals not exceeding ten years, and such modifications as may be introduced should be compulsorily adopted wherever the model by-laws are in operation, as some have been in use without change for perhaps 50 years. The same applies with greater force to the London Building Acts and the regulations made thereunder. Drastic changes have been made in the manufacture of cement, and yet the Act still contains the same requirements as was the case 60 years ago or more. Steel has become standardised and can be thoroughly relied upon, and yet a safety factor of 4 is still demanded in building work, but surely something less than this would meet any reasonable contingencies. In these times of high costs, demands under Building Acts and by-laws should be relaxed so far as is reasonably safe, and they should be made with the belief that they will be acted upon and not ignored. If the latter is the thought underlying them, the dishonest will still depart from them if possible, and the honest will be handicapped.

For some considerable time past there has been an increasing and strong feeling that there should be some relaxation in the by-laws under the London Building Acts relating to the height and capacity of buildings. The Acts provide that ordinary buildings shall not exceed 80 feet in height together with two storeys in the roof. In practice buildings have been approved having a height of 110 feet without any storey being in the roof, but it is felt that in congested areas round important centres that this height might well be increased to some extent, even to 150 feet with two storeys in the roof. A short time ago this question was brought before a general meeting of the Royal Institute of British Architects, and there was a large majority against change; but at the recent elections the mover of the rejection of any change has failed to gain re-election, while the supporters of the change have found seats. In these circumstances it would seem that the late Council did not represent the general feeling.

There is, however, another aspect of the case. The by-

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laws limit the height of buildings for the sale, manufacture and storage of non-inflammable goods to a height of 60 feet to the level of the topmost floor (recently varied to 80 feet to the underside of the ceiling of the topmost floor), and at the same time restrict the area of any floor to 20,000 sup. feet, increased, however, to 40,000 sup. feet with a cup not exceeding 500,000 cubic feet in any single compartment. At the same time it is insisted that the building shall be fire-resisting and furnished with all kinds of fire-fighting apparatus, which is not the case in ordinary buildings which are allowed to be carried up some 20 or 30 feet higher. This does not seem a reasonable proposition, and, having regard to the superior character of such building from a fire-resisting point of view, the time has certainly arrived when there should be no differentiation in the different class of buildings; for if it is possible for the London Fire Brigade to deal with fires at the top of buildings of an office or other ordinary class there should not be any greater difficulty in the second class. Having regard to the concessions recently made, we still hope that this distinction as to the height may be withdrawn.

Public bodies, if they do not approve of schemes put before them, do not, as a rule, state the objections. This they should be required to do.

There is one other matter to which I wish to refer, and that is the question of Smoke Abatement. A Committee was appointed before the war, and its report has recently been published. It was preceded by an interim report, and amongst the recommendations was one that the Housing authority should decline to sanction any scheme unless smokeless methods were to be adopted for supplying heat, &c., except in such cases where the Central Authority is satisfied that such methods are impracticable. So far, I am not aware of any housing scheme, apart from blocks of dwellings, having been provided with any central scheme, and it would seem that the cost of such schemes renders them practically impossible. The nearest that can be attained to smokeless methods is the use of gas for cooking, heating water, &c. The suggestions of the committee are, of course, highly desirable, and perhaps in course of time better methods may be available. Low temperature coke has been experimented with for years, so far without commercial results. In this connection the Research Board might do useful work, especially in the direction of rendering existing fireplaces capable of burning smokeless fuel at the least expense for alterations, and if this could be done satisfactorily, one of the principal grounds of difficulty would be overcome; and in this connection a report has been published by the Research Board on Kitchen Ranges, the result of work by Mr. Barker, who is to favour us with a paper.

British Engineering Standards Association.

The British Engineering Standards Association held its fourth annual general meeting on Thursday, July 13, at the Institution of Civil Engineers, when the chairman, Sir Archibald Denny, Bart., presented his annual report and made a review of the position. The meeting was well attended, and the chairman's report again showed great expansion in the work.

There are now nearly 2,000 engineers who give their time and experience to this national institution. Last year just under £17,000 was expended, towards which industry, in spite of the depression in trade, contributed £9,300, the remainder coming from the Government, the India Office, and the Governments of the Dominions overseas. The chairman thanked all those firms who, in spite of the grave difficulties with which they had one and all been faced, have so liberally supported the association. At the same time he felt that the association should not have to live quite so much from hand to mouth and should be able to build up a small reserve, and this could be accomplished without difficulty if industry would still further increase its subscriptions and the many firms who so far did not financially assist would agree to become annual subscribers.

He then passed in review the progress of the work in the various sections, dealing briefly with the shipbuilding, the

automobile and the electrical work, especially that in connection with the Government Interdepartmental Committee. He also referred to the work of the aircraft section, which should play an important part in the reconstruction of that branch of industry so much before the public at the present time. Other sections were dealt with, but everyone knows the enormous ramifications of the B.E.S.A. and how impossible it is in a short statement to do more than touch on a few of the more important aspects of this great work.

The association has issued 72 new and revised specifications during the year, and the sales of the publications have reached 39,000, in addition to a very large number of aircraft specifications distributed on behalf of the Air Ministry.

A certain number of constructive suggestions were made by those present, which will in due course be considered by the Main Committee.

Once again we would counsel industry generally to support the association financially in order that it may carry out the work it has in hand and be in a position to look forward to increased usefulness in the future. It cannot be too emphatically urged that contributions to this organisation should be considered as a sound business investment from which an adequate return is expected and, indeed, as all will agree, obtained.

An Important Amalgamation.

Messrs. Rippers, Ltd., the well-known firm of joinery manufacturers, shop fitters, etc., of Castle Hedingham, Essex, and 165 Gray's Inn Road, London, have acquired a controlling interest in the old-established firm of Geo. Evans & Sons, Ltd., timber merchants, importers and joinery manufacturers, of Newton Heath, Manchester.

The Newton Heath business will be carried on under the same name as before, but under the direct management of Mr. H. T. Ripper, as chairman of directors, assisted by his two younger sons, Mr. Donald C. C. Ripper and Mr. Dennis F. A. Ripper.

The leading members of the staff have been retained, including Mr. A. V. Evans and Mr. C. T. Gresham.

By this fusion of interests the customers of both firms will benefit.

Every kind of joinery is manufactured, and timber suitable for all purposes can be supplied at market prices.

The Newton Heath Works are being thoroughly reorganised and brought up-to-date, and new blood is being introduced into several departments.

Forthcoming Events.

Friday, July 28.—London Society. River trip to below Greenwich on s.s. "Royalty." Launch leaves Westminster Pier 5 p.m.

Saturday, July 29.—Northern Architectural Association Club. Visit to Sinclair's Building and Holy Trinity Church.

General.

Mr. Alexander P. Durlacher, F.R.I.B.A., A.M.Inst.C.E., F.S.I., of 15 New Bridge Street, Ludgate Circus, E.C., died on July 14, aged 61, at a nursing home.

At a meeting of the National Wages and Conditions Council for the Building Industry, held on the 14th inst., the following resolution was passed:—"The National Wages and Conditions Council for the Building Industry, being duly appointed by the employers and operatives in the building trades to fix wages and conditions of employment, deploras the action of any parties affiliated to the Council not loyally observing the decisions arrived at, and condemns the action of public authorities for allowing, either directly or through their contractors, building work to be done on terms contrary to the decision or decisions of this Council."

The annual distribution of prizes took place on Wednesday, July 19, on board the "Arethusa," at Greenhithe, which is under the command of Commander F. G. C. Coates, D.S.O., R.N. Over some 200 lads in training presented a smart appearance, and the report on their work during the past year does great credit not only to the boys, but to all those who give so much time to the Institution. Full particulars may be had of the Institution from the Secretaries of the Shaftesbury Homes and "Arethusa" Training Ship, 164 Shaftesbury Avenue, W.C.2, to whom donations should be sent.

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Architectural Criticism of the County Hall.

THE circumstances under which the London County Hall has been carried out have been unfortunate, as in consequence of the war its execution has been greatly delayed and its cost enhanced, with the result that the general public have never felt the same interest in a work of the first magnitude which is shown when a great project is carried to completion within a comparatively short period of its inception. Then, too, the public, hearing the actual cost of the new buildings, are inclined to be additionally critical of the *quid pro quo* which they think is represented by the buildings erected. In addition, if we look backward we shall remember that the selection of a design evoked an unusual amount of criticism in architectural circles and could hardly be described as being a popular award.

The changes of plan since the adoption of the award have also been matters of comment, notwithstanding the fact that any design would have probably been largely remodelled before the working drawings were made. But we believe it will be generally admitted in years to come that the London County Council have secured a dignified and well-planned building, and one which generally fulfils the objects for which it was erected.

The basis of former criticism of the design and that more recently expressed is that the County Hall is a free and unacademic rendering of English Renaissance more akin to the precedents set by Norman Shaw than to those later types of design which have of recent years found favour with architects and are almost exclusively considered as models by the schools of architecture, particularly those of Liverpool and University College. To those of these opinions a bank in a country town sometimes suggests an opportunity for using the Greek Ionic order, and perhaps a doorway founded on the precedent of the Eretheum, while the design of a more important building must conform to the somewhat sterile standards of fitness which found favour with Cockerell, Decimus Burton, and other late exponents of the art of classical design. We have even heard some advocates of this school of thought condemning the coarseness of Wren's work, while in moments of enthusiasm they will refer with fervour to the beauties of some late Empire or even early Victorian design. Their standard of architectural merit is to be likened to the Socialist's views of national politics, while they evince the Socialist's intolerance of the views of those who differ from them. Now a man of pronounced views may condemn the work of others, and such condemnation may be listened to appreciatively by those who do not belong to the profession as being the opinion of experts, whereas a frank statement of what the experts think is admirable would reveal the fact that the critics' bias renders their judgment unreliable and unsound.

We raise this point not only out of our wish to see justice done to Mr. Knott for what should be regarded as a fine achievement, but because we are convinced that, useful as the Schools of Architecture may be in promoting study and technical skill, several of them are doing mischievous work in inculcating false ideals and in encouraging intolerance.

The architecture of the later classicists and of the Greek revival died of inanition because it was the work of students and pedants who had forgotten the necessary correspondence between architectural style and the instinctive sense of beauty in structure which has appealed to the average man in all ages. The finest buildings in the world are not those whose appeal is difficult to understand, but those whose appeal is difficult to ignore. We should not, in a word, express ourselves in a foreign language, but tersely and simply in the vernacular, which can be most readily understood by all. It is quite conceivable that the Schools might produce a race of architects who would inflict on the world a new and severer later classical revival, but it is unthinkable that such a revival would ever be broadened into a national style. It would be far more likely to lead up to the reaction of another Gothic revival. But we who regret the consequences of such revivals in the past must surely wish to avoid their recurrence in the future. Shaw lived through the period of the Gothic revival and slowly but surely worked his way to a broader conception of the meaning of style. Before he died he had discarded the affectations of "Queen Anne" and was designing on the broad lines of the English Renaissance, using classic forms and proportions, but never allowing them to fetter his conceptions of form and mass. We feel that he and his followers were on the true track and that their work was a true advance towards the building up of a living English tradition of architecture. Whatever its merits or defects are, the London County Hall is a late example of this movement, and for that reason we think a more valuable contribution to contemporary architecture than has yet been recognised. We do not need to go to Greece, Rome, or even France, for our architectural inspiration when we have a mass of past work of the seventeenth and eighteenth centuries built by Englishmen and understandable by people who will never appreciate the most scholarly studies of students who are acting like those who sought in the waters of Damascus what the Jordan provided for them.

The student of to-day should not forget that if the best of our modern work has been founded, not on the system of the *esquisse* and the *study*, but on the surer basis of knowledge acquired by the painstaking and more laborious process of measuring and sketching actual buildings until in the process the secrets of their construction and charm become known. It is this that has lifted the best of our modern work from the deadness of the imitative periods of the nineteenth century, and it is by the aid of such processes rather than those in vogue at the architectural schools that we may hope to found the architecture of the future, unless we are inclined once more to let ourselves slip into the sloughs of a tame and dead pedantry from which it took us years to emerge. The architecture of Soane and Cockerell, of Smirke and the Inwoods, should, in spite of the genius shown in many of the buildings produced, rather teach us what to avoid than what we should imitate, while on it we cannot hope to found an architecture which will appeal to the average Englishman.

Our Illustrations.

PROPOSED HOUSE AT AURLAND, NORWAY. H. S. GOODHART-RENDEL, Architect.

DRAWINGS MADE BY GEORGE BASEVI ON "THE GRAND TOUR."

BLACKPOOL PARK AND RECREATION CENTRE. THOMAS H. MAWSON & SONS and THOMAS ADAMS, Architects, in collaboration with FRANCIS WOOD, Borough Engineer and Surveyor.

This large and important scheme deals with a site 274 acres in extent, within easy distance of the centre of the town. An encircling park avenue will tap the whole of the contributory roads, welding them into a logical and consistent scheme. The chief entrance is at the head of Mere Road, where five roads converge.

The most important factor in the whole park design is the convenient and economic development of a large number of recreational spaces in such a manner as to suggest attractive natural playing fields set in a great natural park.

The second object to attain is the creation of a great social centre in the park, around which all the recreational facilities shall be grouped.

The scheme includes the following features:—

(1) Italian garden and social centre, with restaurant; (2) bandstand, with seating accommodation for an audience of 2,500; (3) golf course (18-hole), with club-house of a wing of the restaurant; (4) lake (26 acres) for boating and yachting; (5) county cricket ground, with grand stand and other seating accommodation; (6) seventeen junior football and cricket-fields; (7) twenty-four grass tennis-courts; eight hard tennis courts; (8) six bowling-greens, with club accommodation in wing of restaurant; (9) eighteen-hole putting course; (10) two

children's playgrounds; (11) children's model yacht pond; (12) park nursery, with central winter garden and range of glass-houses; (13) rock gardens; (14) plantations, avenues, and groups of shrubs, giving a wide variety of pleasant walks and promenades.

Two factors dominate the location of these recreation grounds—(1) the convenience of players; (2) cost of construction. Thus the lake is placed in a natural hollow, where the amount of embankment is reduced to a minimum and construction is comparatively inexpensive. The golf course occupies the land most suitable for it on the more undulating ground, which, whilst good for golf, would, on account of excessive cost, be unsuitable for any other form of recreation. The bowling-greens and the cricket ground occupy sites which are already partially levelled. The football grounds are planned on the most level parts of the park, whilst the tennis-courts can be adjusted to existing contours by arranging them on several levels or terraces. The intervening spaces throughout the park are given up to lawns and plantations, which, consistent with an artistic treatment, follow as far as possible the existing contours of the ground.

The scheme has been prepared by Messrs. Mawson and Sons and Thomas Adams, of Lancaster, in collaboration with Mr. Francis Wood, M.I.C.E., borough engineer of Blackpool.

Notes and Comments.

The London University Site.

The question of the London University site hardly seems to be regarded as a closed one in spite of the adoption of the Bloomsbury site by the Senate. It is now proposed that the advantages of a site which belongs to the Duke of Westminster should be considered. This is bounded by Horseferry Road on one side and on the other by Vincent Street, while its two remaining sides front the river and Regency Street. Adjoining this, towards the Tate Gallery, is a builder's yard fronting the river. On the opposite side of the river are Messrs. Doulton's works, and it is suggested that the whole area, which amounts to 28 acres, would form an admirable site for the purposes of the University, as King's College might be rebuilt on the Lambeth side of the river, with the Senate and other university buildings immediately opposite. The buildings on the Lambeth side would immediately adjoin the Medical School of St. Thomas's Hospital. It is said that Sir Edwin Lutyens has expressed a favourable opinion of the site and that officials of the University and County Council think it better than either the site chosen or Holland Park. Its cost, it is stated, would be about two million pounds. The suggestion is a pleasing one, but it remains to be seen whether it will be possible to secure further consideration in view of the Government's attitude in the matter of the Bloomsbury site. The cost of the river site, which works out at £71,428 an acre, as against £38,636 an acre for the Bloomsbury site and £5,000 for that of Holland Park, seems to be the greatest difficulty in the way of its possible selection, even if the question is once more reopened.

The Destruction of Property in Ireland.

It is to be hoped that the authorities have intimated to the Provisional Government of Southern Ireland that no grant-in-aid will be made from the British Exchequer to cover the cost of the insensate destruction of valuable Irish buildings which is now taking place. At the present rate of destruction it will not be long before every building of note and value in Southern Ireland is a mass of ruins. No justification of the process on the score of the necessities of war can be alleged, while it would be an immense loss to art if the fine records of the eighteenth century in Ireland were to be wiped out. It has been stated by our correspondents that the new Irish authorities having authority over historic buildings are indifferent to their value and would be quite prepared to wipe out the Four Courts and perhaps the Customs House at Dublin instead of restoring them. The loss would be a great one to the richest nation

in the world; it is greatly more so in the case of Ireland, which would probably find itself in difficulties if it attempted to raise money for purposes of reconstruction. The immense difficulties met with in reconstructing the devastated regions of France should be a warning to those in authority in Ireland, but while France has the sympathy of the whole world, Ireland would find she has none, for her sons have gone out of their way to cause ruin and destruction just like mischievous and troublesome children.

The Late Director of the Prado Museum.

A serious loss to art has recently occurred in the sudden death last month of Señor Don Aureliano de Beruete, Director of the Prado Museum at Madrid. Señor de Beruete was the son of a famous collector and critic who was (and is still) considered the greatest authority on Velasquez, and was himself a well-known writer, especially on subjects connected with Spanish art. He had taken a leading part in organizing the exhibition of Spanish art recently held at Burlington House, and had come over for the hanging. Mr. Selwyn Brinton, to whom Señor de Beruete had entrusted the publication in English of his work on Goya, has now finished it, and the book, entitled "Goya as a Portrait Painter," with fifty-eight collotype plates, will shortly be published by Messrs. Constable. Señor de Beruete y Moret was still a comparatively young man when he died in the midst of his career.

The Choice of Colours for Paint.

Messrs. Harland & Sons, of Merton, London, S.W.19, paint manufacturers, have thought out a contrivance which will be welcomed by many architects. It takes the form of a tin case containing 12 tubes of oil paint, together with a small bottle of turpentine and one of linseed oil, brushes, and slips of tin to try colours on. With these the architect can mix his own tints for paint work in his office, and Messrs. Harland undertake, if they have the sample decided on, to match the sample and send down paint of that colour to the job, thus obviating the possibility for mistakes such as often occur. Those who have known the difficulty of getting a journeyman painter on a job to mix exactly the right shade of colour and to keep to it will greatly value this admirable scheme for securing what they want. As the case of colours costs money and could not be sent out broadcast, Messrs. Harland & Sons propose to send it out to those architects who write asking for it, as these are *ipsa facto* the men who would make use of it.

London Art Galleries.

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We have now reached the close of the exhibitions in London Galleries for the present season, and in many cases the pictures now shown will remain on view during the month of August and early September. This applies to the Grosvenor Gallery Summer Exhibition, to the Exhibition of Early English watercolours at Walker's Galleries, and to the present exhibition at the St. George's Gallery. This last display, consisting of paintings and coloured drawings by Adrian A. Allinson, with a few oil paintings by Gregory Brown and Alfred Wolmark, contains features of considerable interest, more specially in Mr. Allinson's work. I understand that this artist, who is a frequent contributor to the London Group, had already in his Slade School days become interested in scenic painting, and had later, about 1915, designed the setting of operas for Sir Thomas Beecham. This fact is of interest in connection with the work shown here; for in these Swiss landscapes, mostly of winter scenes deep in snow, a certain conventionalising of the subject may still be traced. But scene painting has trained many of our finest artists, among them David Roberts, and later that delightful watercolour painter, W. R. Beverley; and though uneven in merit, there are fine qualities in some of the Swiss scenes here.

First I should mention with approval the colour scheme in such a subject as "The First Snow," and also the composition, grouping and sense of movement of the figures in such scenes as "The Goatherd," "Potato Gatherers," and "Climbers on the Moraine." In this last subject we feel the tremendous task which lies in front of these Alpinists, and also find another really admirable feature of these paintings—namely, the suggestion of the volume and density of the snow: this feature is still more remarkable in the drawings, such as "Winter Sunlight" and "Autumn Snow, Brienz." These drawings appear to be carried through on rather smooth thin paper with waxed chalk, the result being permanent, needing no setting, and very telling; and here, again, we seem to trace the effect of the artist's training in scenic work. In some of the oil paintings—even in the excellent "Potato Gatherers" above mentioned—there is wanting the sense of distance and atmosphere; and, again, such a painting as "The Pear Tree" is, in my judgment, entirely bad in colour and drawing, and unless the catalogue mercifully came to our aid it might be difficult to recognise it, not merely as a pear tree, but, with those strings of bright crimson, as a tree of any known species which grows in Europe.

Mr. Wolmark has a few paintings not of first importance; the best being a figure study where the flesh painting is admirably convincing, though the face is poor and as if carelessly approached, and the result of hanging square pieces of strongly coloured drapery for a background is, in my own view, distressing to the eye, and takes away from a really good figure study. Mr. Gregory Brown has three landscape studies treated decoratively, mostly of fir trees in a strong, broken light. One of these, which I believe was reproduced in "The Studio," is admirable in colour and composition.

At Walker's Galleries, Mrs. Basil Johnson (Bessie Percival) has been showing a series of paintings in watercolour of gardens in Madeira and of Switzerland in winter. Two more different subjects for treatment can scarcely be imagined. These lower hill slopes in Madeira run up, I believe, often 2,000 or 3,000 feet from the sea, against a background of higher mountains which rise to double that height, and the lower slopes are terraced with gardens of private villas or hotels filled with beautiful odorous tropical plants. It is to these that the artist has here devoted her attention: we see the exquisite pale blue of the hydrangea, the deeper note of the agapanthus, the marvellous flame-colour of the Australian flame tree, the jacaranda, bombax, oleander, and hibiscus. Mrs. Johnson shows us these against a background of misty grey-blue hillside as notes of strongly defined colour; and in a case in this room her

sister-in-law, Mrs. Hilda Percival, had some sketch books and separate sheets of detailed studies of these exquisite blooms. One wall, devoted to Switzerland in winter, showed the Jungfrau from Mürren and the Eiger in its desolate grandeur, Mont Blanc from Bretaye and Diablerets almost buried in snow, as well as the Engadine mountains handled effectively in watercolour. I have already mentioned in these columns the Early English watercolours in the Gallery. This Exhibition will remain open during August and part of September, and a second visit repaid me in studying these beautiful drawings. On this occasion I was impressed with Charles Bentley's "Seascape," very finished and yet with nothing of the "niggly" character; with John Sell Cotman's architectural drawings ("Doorway of Thwaite Church," with nine other subjects), all from Lord Amherst's collection, and with the paintings of Venice by William Callow, J. D. Harding (Venice, 1843—this is not in the catalogue) and James Holland ("The Fish Market, Venice"—which was later pulled down, and rebuilt so admirably by that fine artist and architect, Cesare Laurenti). In W. R. Beverley's "Conway" the colour is delightful, but the artist seems to get a little wrong with his values, the hills behind threatening to come before the sand in the foreground. The pencil study of the head of Emma, Lady Hamilton, by George Romney, from Dr. Monroe's collection, has a special interest: this and the ten landscapes by that collector are lent to the Exhibition by his great-granddaughter.

I am informed by the authorities at Trafalgar Square that several valuable additions have been made to our National Gallery. The latest and perhaps the most important of these is a Virgin with SS. Catherine and Pelagia, by that rare master Quintin Matsys, presented by Mr. Charles Clarke. This work is painted on linen in tempera, and was in the Linnell sale at Christie's some four years ago; it now occupies a central place among the Flemish masters in Room XV. A French primitive painting of the Trinity with Angels, now in the first French Room (No. XX.), is a thing of extraordinary rarity, apart from its decorative charm. It is considered to date about 1410, and belongs to the group of artists from whom came the portrait of Richard II. in Westminster Abbey: it was found in Piedmont, taken to Berlin, and purchased by the Trustees with the aid of £1,000 contributed from the National Arts Collections Fund. Sir Henry Howorth has presented several choice works from his collection to our Gallery: these include (Room XVIII.) a Holy Family by the Spanish painter Antonio Castillo y Savaaedra, a predella representing the "Nativity," of the school of Masaccio, and two Dutch paintings, one of them by Jacob van Oost the elder (Room XII.). Mr. Lycett Green has presented a painting of the Infant Christ with S. Anthony, by Amigoni (Room VII.). I mention in my own study of Venetian Art ("The City Triumphant") Jacopo Amigoni as a pupil of Gregorio Lazzarini, though he never reached the heights of his fellow pupil, Gianbattista Tiepolo. He seems to have been, like many of the Venetians of this time, a travelled artist, and I am informed that he resided for some time in this country. These very considerable additions to our collection have entailed the rehanging of Room XVII., and partial rehanging of Rooms XV. and XX.

The Dutch are wisely alive—setting us an example in this respect which we should do well to follow before it is too late—in keeping the masterpieces of their wonderful national art, or even bringing them back when opportunity occurs. I understand that "The Sacrifice of Isaac," by Jan Steen, who is so richly represented in the Amsterdam Gallery, has recently been bought by Mr. A. Preyer, of The Hague, from the collection of the Countess of Dartrey. This painting is known as having been in Lady Cremorne's collection in 1842.

S. B.

Modern Methods in Building Construction.—XXVII.

By Albert Lakeman, M.S.A., M.C.I.

CONCRETING—(continued).

The transport of the mixed concrete to the place of deposit is the third operation given in the sequence, and although this may not appear of great importance at first sight, it is undoubtedly the operation which frequently determines the cost and also the quality of the work. A lack of foresight in the arrangements for the transport of the concrete will result in slow progress, and if the distances between the mixing installation and parts of the structure to be concreted are comparatively great, there is a danger that the initial set will take place and the quality of the material will be spoilt. The slow progress will also prohibit any real speed in the other operations, and thus the waste of time will result in a serious loss of money. Unfortunately there is sometimes considerable ignorance on the part of some contractors as to the nature of the setting action in concrete work, and they do not appreciate the necessity of placing the mixed material in position as quickly as possible, apart from the question of the loss of money that may result from delay. As an example of this, the author once had occasion to complain to a contractor that the transport facilities were too slow and the initial set was taking place before deposit, whereat the contractor pointed out that as the concrete was being moved, and consequently shaken about during the journey from the mixer, it could not become solid, and he was firmly convinced that the setting action only commenced when the mixed material was allowed to rest! It needed quite a lot of discussion on the part of the author before this man realised that the chemical action between the cement and the water was taking place during transport, and the discharge and raking out of the concrete from the receptacles at the place of deposit was breaking up and partially destroying the setting that had commenced *en route*. It may be that the majority of contractors have a thorough knowledge of the chemical and physical properties of the material, but the supervisor must always guard against the possibility of poor quality through ignorance as well as that resulting from indifference or carelessness. The methods of transport possible include the use of towers and chutes, wagons on standard or narrow gauge tracks, horse-drawn tip-carts, buggies and wheelbarrows, or combinations of these appliances.

The use of towers and chutes has become more extensive of recent years, particularly on large schemes, although when first introduced, and even at the present time, considerable prejudice existed among engineers against the adoption of the system, because it was considered by many that the pouring of the mixed material resulted in the large particles of the aggregate becoming separated from the

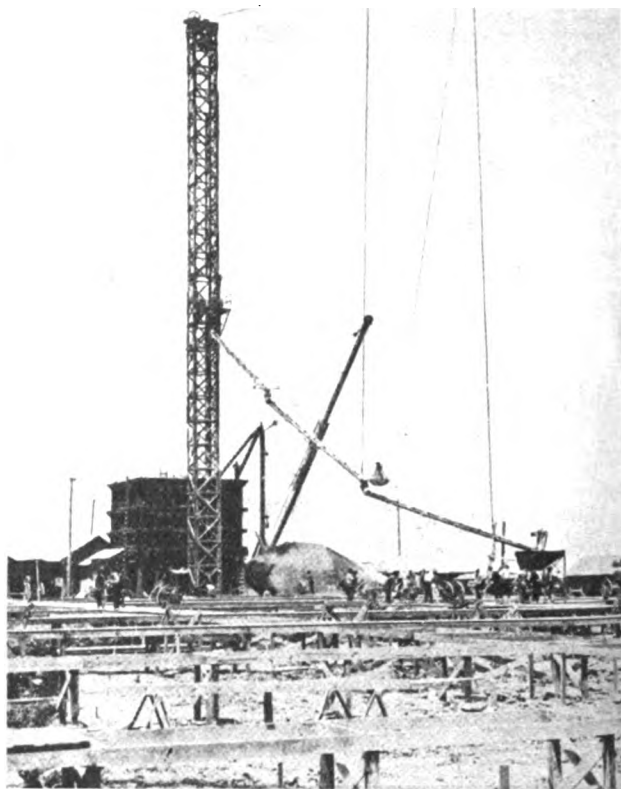


Fig. 144. TOWER AND CHUTE FOR CONCRETING.

remainder, and the concrete so made was inconsistent and poor in quality. A great deal of this prejudice has been overcome owing to the fact that a large amount of good work has been executed by this method, and also the introduction of a receiving hopper at the end of the chute has permitted the bringing of the whole of the materials together again before they are deposited in the work. The cost of the equipment and the installation for this method is, of course, an item that must be fully considered at the outset, but in a scheme of any magnitude the initial outlay will be saved many times over, and in addition some of the equipment at least will be available for future work, as it can be dismantled, cleaned as required, and re-erected on a different site.

The installation will require the erection of a hoisting tower, a lifting bucket, several lengths of metal chute with junctions and elbows, and also a hopper mouth next the tower, while the provision of a receiving hopper at the lower end of the chute is desirable. Typical installations are shown in figs. 144 and 145, and the general arrangements can be seen. In fig. 144 the receiving hopper at the lower end of the chute is shown on the right-hand side, and in both illustrations the suspension wires for supporting the chute are indicated. The timber towers in the installation illustrated are 150 feet high, and the erection of this temporary structure may be considered an expensive and difficult matter at the outset.

It is quite possible, however, to build and erect these in a simple and economical manner, as they can be made on the ground complete and be afterwards hoisted to the vertical position in about two hours or less.

These particular 150 feet towers were about 6 feet square on plan, and they were built up with 6 inch by

* PART I.—I. Introduction, Steam shovels, Jan. 13; II. Steam shovels, Trench diggers, Jan. 20; III. Grab buckets, scrapers, Jan. 27; IV. Drag-line excavators, Feb. 3; V. Derricks and cranes, radial loader, paving-breakers, Feb. 17; VI. Surplus Soil Transport (Hand Labour), Feb. 24; VII. Surplus Soil Transport (Horse-drawn wagons, Steam-driven wagons), Mar. 3; VIII. Surplus Soil Transport (Steam-driven wagons), Mar. 10; IX. Surplus Soil Transport (Steam-driven wagons, Petrol wagons, Narrow-gauge track with wagons), Mar. 17; X. Surplus Soil Transport (Narrow-gauge track with wagons, Trucks on Standard-gauge track, Electrically-driven trucks and vehicles), Mar. 24.

PART II.—XI. Foundation Work (Ordinary soils, Soft soils), April 7; XII. Foundation Work (Soft soils), April 17; XIII. Foundation Work (Soft soils), April 21; XIV. Foundation Work (Soft soils), April 28; XV. Foundation Work (Soft soils), sheet piling, May 5; XVI. Foundation Work (Soft soils), steel-sheet piling, May 12; XVII. Foundation Work (soft soils), steel-sheet piling, pumping, May 19; XVIII. Foundation Work (Soft soils), pumping, May 26; XIX. Foundation Work (soft soils), foundation piles, June 2; XX. Foundation Work (soft soils), foundation piles (cont.), June 9; XXI. Foundation Work (soft soils), foundation piles (cont.), June 16; XXII. Foundation Work (soft soils), Waterproofing, June 23; XXIII. Foundation Work (soft soils), Waterproofing (cont.), June 30; XXIV. Waterproofing (cont.), July 7; XXV. Water Supply, July 14; XXVI. Concreting, July 28.

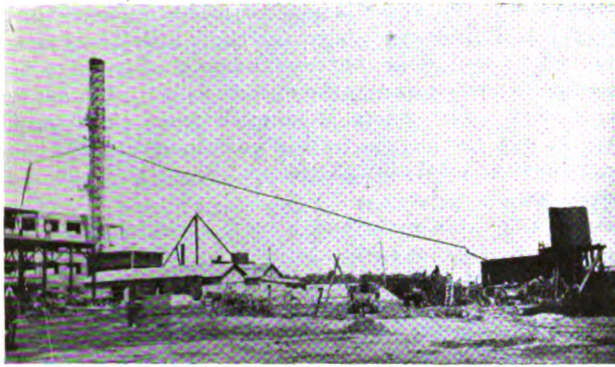


Fig. 145. TOWER WITH LONG CHUTE FOR CONCRETE.

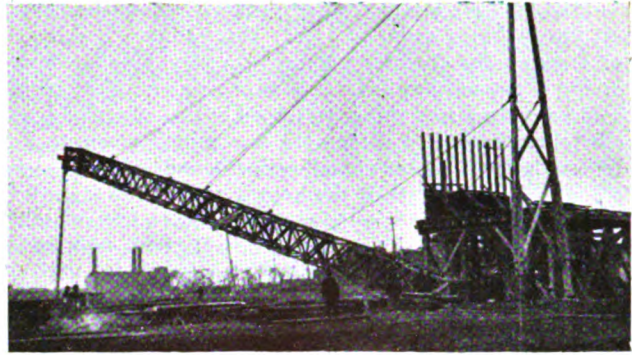


Fig. 147. HOISTING TIMBER TOWER.

2 inch timber at the corners braced with 6 inch by 2 inch members placed at 45 degrees, and with cross-pieces of similar section. The joints in the members were simply butted, and wooden cover pieces were nailed on to form the connection. The whole of the connections were made with spikes only, and no bolts were used; thus the building up of the framework constituted rough carpenter's work, and it could be speedily executed. The fabrication at the ground level is obviously a distinct advantage, as no scaffolding or ladders are required, the work is easily set out, and a number of carpenters and labourers can be put on to the work at once. When the structure is completed, including the hardwood guides for the hoisting bucket and the bearers and pulleys forming the head gear, the raising can be effected. The foot of the tower is anchored, and several sets of lifting tackle are attached to exert a pull at different points on the length of the tower and prevent undue deflection or buckling and allow several men to work at the hoisting. Ordinary lifting poles are employed for the attachment of the fixed pulleys, and several steel guy wires are used to steady the tower, these being gradually slackened out as the angle of the tower is changed during the lifting. Some idea of the work of raising a 150 feet tower can be obtained from figs. 146, 147 and 148, where fig. 146 shows the first stage when the tower is just leaving the ground, and figs. 147 and 148 show the same tower soon after. The wooden tower is supported on the walls of the pit, which is constructed below the ground to allow the lifting bucket to descend to the required level, which is governed by the level of the discharge from the mixer, and a simple anchorage is provided to keep the tower in position at the base. The pit should be constructed with a recess at one side to allow a workman who may be engaged in clearing out any spilt concrete in the pit to stand clear of

the hoisting bucket should this be put into operation while he is so engaged. When the tower has been brought to the vertical position it is securely guyed by steel ropes attached at the top and at intermediate levels, and anchored to the ground at suitable positions. The anchors can be provided by casting a large steel eye bolt into a rough concrete mass below ground level for the attachment of the guy rope. There may be some doubt among engineers and contractors as to the stability of timber towers of this height being made with spiked joints only, at the ground level, and afterwards raising them in the manner described, but such practice is a common one in America, and the particular towers here illustrated were erected and used for several months with satisfactory results, and on one occasion they were subjected to a gale when the wind velocity reached over 90 miles per hour, and they were quite uninjured by this. When exposed to considerable rainfall followed by very hot sun there is a great tendency for warping and twisting, and care must be exercised in anchoring and guying to prevent excessive movement, or the running of the hoisting bucket will become difficult or impossible, and "jamming" is likely to occur. The use of steel towers will avoid any difficulty in this respect, but the initial outlay, both for material and erection, will obviously be considerably higher, and when a good timber supply is available timber-built towers are extensively used.

Immediately after the tower is erected and securely stayed, the installation of the hoisting bucket and the chutes

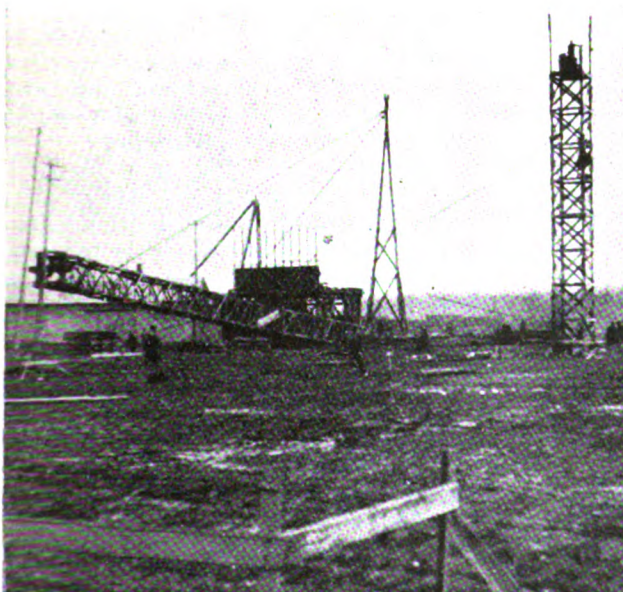


Fig. 146. FIRST STAGE IN HOISTING TIMBER TOWER.

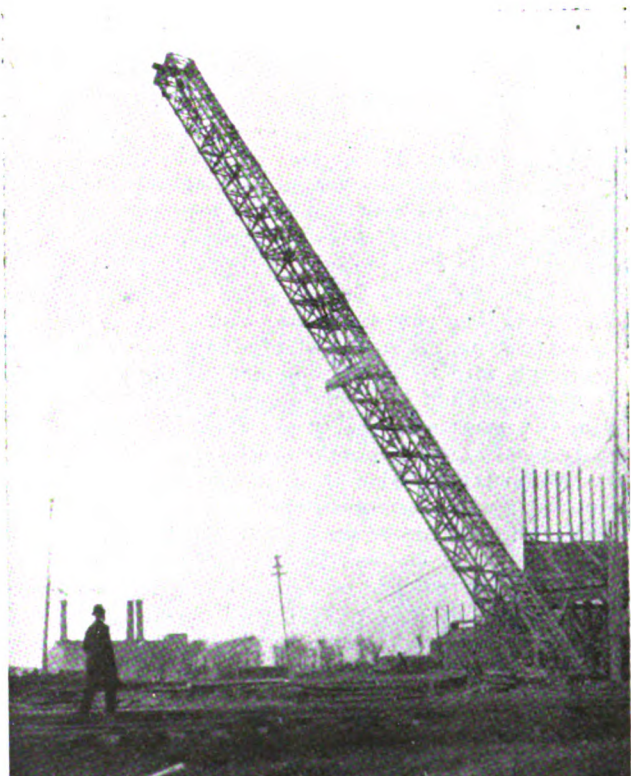


Fig. 148. HOISTING TIMBER TOWER.

can be proceeded with, and the whole apparatus can be put into working order in a very short time. The bucket for hoisting the concrete should be a steel tipping bucket having a capacity sufficient to take one complete charge from the mixer, and this is equipped with a tripping device which automatically discharges the mixed concrete into the hopper at the head of the inclined chute when the level is reached. The level of the hopper on the tower may be varied from time to time as the upper end of the chute is raised or lowered to suit the distance to be covered between the tower and the receiving hopper which is placed at the lower end of the chute. An illustration of a typical receiving hopper is shown in fig. 149, where the lower end of the chute can be seen ready for the discharge of the concrete. This hopper is of the portable type, as it is carried in a metal framework of a light nature, and it is

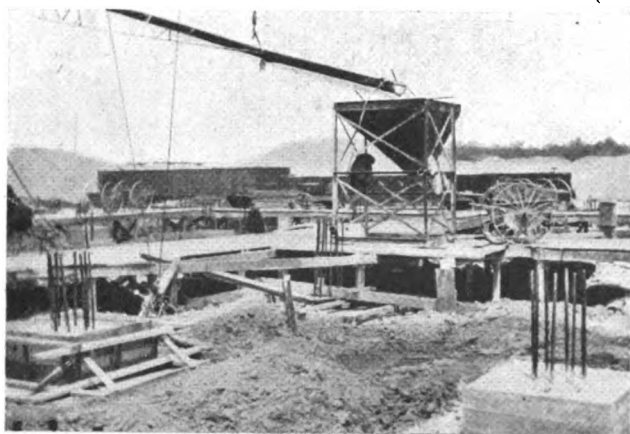


Fig. 149. RECEIVING HOPPER FOR CONCRETE.

fitted with an outlet at one end which is controlled by a lifting metal plate sliding in grooves. The capacity of this hopper must also be equal to at least one charge from the mixer, and it is better to have a margin and make the capacity at least 50 per cent. more. The complete charge from the mixer is therefore taken by the steel hoisting bucket, raised up the tower, discharged into the hopper at the top of the chute, and flows by gravity down the latter directly into the receiving hopper, which is placed in the vicinity of the work to be concreted. As the complete charge comes into this hopper, it will be clear that any separation of the constituents forming the mass due to variation in speed of flow will be corrected at this point, where the whole mass comes together again before use. The receiving hopper is easily controlled by one labourer, who sits on the top and opens and closes the outlet by a rod or lever when the buggies or barrows are being filled. The men operating the buggies—which are preferable to ordinary wheelbarrows—should be arranged to make a complete circuit that passes the hopper and the place of deposit, to give a flow of traffic in one direction only. The buggies are brought up to the hopper, filled by the operator above, and then pass on to the point of concreting, where the contents are discharged, and the buggy pushers continue the circuit without obstructing men coming along behind. As the chute and receiving hopper can be easily moved from one point to another, it can always be arranged near to the place of depositing the concrete, and the circuit can be a comparatively short one, and no long travel will be necessary for the labourers when wheeling. The number of men required can be arranged to suit the output of the mixer, and each one can be kept fully employed if this number is just sufficient to empty the hopper between two discharges of the mixer. The man operating the outlet from the hopper will also act as the signaller to the tower operator, and prevent the latter sending down a mixed batch if by any chance the hopper is partly full and he is unable to receive same. The tower operator will be in touch with the operator in charge of the mixing, and the latter can be instantly notified to slow up in case of any hitch in the depositing operations. At the midway break and at the end of the day's work the mixer should be

washed out, the water being first loaded into the lifting bucket and discharged down the chute into the receiving hopper to well clean out any material that may have become deposited during the operations before it has time to harden. The water is emptied from the receiving hopper into the buggies to help in cleaning out the latter, and thus the whole installation can be washed out in one operation.

When the chute method is used for concreting large masses of concrete in the form of foundations for large columns, piers or walls, the receiving hopper will not be required, as the discharge can be made directly into the excavation, when the mass should be tamped and generally distributed to thoroughly mix any coarse aggregate that may become separated from the fine aggregate and cement during the pouring. Some engineers raise an objection to poured concrete on the ground that it has to be made "sloppy," requiring more water than is ideal in order to ensure the necessary flow down the chutes, but the author has found that the consistency of the mix required is only that which will be essential in concrete for reinforced concrete work generally. When concrete has to be placed in work where considerable reinforcement is necessary, it has to be made sufficiently liquid to flow around the rods and allow the mixture to be well worked into all parts of the form, and thus the ideal percentage of water cannot be adhered to; but the loss of strength is not usually considered a serious matter, and therefore, if the consistency for reinforced concrete work generally is sufficiently liquid for pouring purposes, the objection raised cannot be upheld. In several cases the author has taken samples of poured concrete for test cubes, many of these being taken at the same time as others from concrete not poured, but on the same site, and the results of the tests at 28-90 days have failed to reveal any defect or loss of strength as a result of the pouring when the materials and proportions employed have been the same in both classes of concrete. The use of towers and chutes for the transport of concrete can be considered as the most economical and speedy system that can be employed on any large scheme, and it is flexible, easily controlled, and capable of producing work of good quality. The second method of transport given was that involving the use of wagons on standard or narrow gauge tracks. The use of wagons on standard gauge tracks will be very limited in all ordinary schemes because the method is not sufficiently flexible, and it will be comparatively expensive to instal. The wagons will require to be specially made or old wagons must be converted, as a sloping bottom with a discharge at the side is essential, and while these are an easy matter with the narrow gauge system, considerable expense will be entailed with the standard gauge. The same principles will apply in both gauges, and, owing to the narrow gauge being more suitable than the standard gauge, the description of the methods will be given for the former. There is, however, one method of using standard gauge track for concrete work which the author has seen employed with satisfactory results as regards speed and economy, and where suitable conditions prevail it is worthy of consideration.

The particular section of work dealt with covered the concreting of a large culvert with a pipe subway above, and standard gauge track was laid parallel with the line of the cutting which was to be excavated for the purpose of operating a locomotive crane in the removal of the soil with a grab bucket. When the excavation was complete the contractor desired to use the track for concreting operations, and in order to achieve this he arranged a portable concreting installation which was in reality a concreting train. A medium size batch mixer was mounted on a flat-bottom wagon, and coupled to this on either end were wagons containing aggregate and cement, the aggregate being in the wagon as received on the site by rail. Suitable points were provided throughout the length of the work for water supply, and hose connections were used which could operate between any two points. A portable platform at the truck level was made which could be easily moved alongside the track at the back of the mixer for the purpose of control and ample space for operating the

mixing. The raw materials were unloaded direct from the trucks to the mixer, and the mixed concrete was discharged directly from the mixer into the excavation by the aid of short wooden chutes which could be extended or be changed in direction without difficulty. The train would concrete a section covered by the radius of the chutes, and then be moved forward to the next section. When the raw materials were exhausted the train was shunted, made up again with other material trucks, and brought back to the required position. The method proved very satisfactory in this particular work, and for underground work on an extensive scale it has great possibilities.

(To be continued.)

R.I.B.A. Examination Results.

Twenty-six candidates passed the recent Intermediate Examination of the Royal Institute of British Architects. The names of the successful candidates placed in order of merit are as follows:—

Messrs. L. W. T. White, A. M. McKewan, R. O. Vine, A. V. Montagu, H. J. Coates, C. E. M. Fillmore, S. C. McManus, C. C. Gray, A. W. Hodges, G. Wilde, D. Cuthbertson, E. G. Felgate, W. H. Ford, J. Buyers, G. C. P. Gough, C. T. Pragnell, G. J. Bragg, B. Cowser, A. G. Geeson, R. T. Green, G. R. Barnsley, R. J. Carter, A. W. Ecclestone, N. R. England, J. C. Richard, K. S. Tayler.

Eighty-five candidates failed to satisfy the Examiners, and have been relegated to their studies.

The following candidates passed the Final and Special Examinations:—

Messrs. W. Baillie, W. A. C. Ball, B. Butler, F. N. Gilder, E. L. Gunston, M. R. Hoffer, E. K. D. Hughes, A. G. Jenson, G. W. M. Leverkus, W. B. T. Newham, D. S. Petrovitch, A. S. Reid, F. A. Richards, W. Ryle, F. J. Sawyer, H. D. Sugden, A. E. Williams, Messrs. W. J. Allcorn and E. G. Hines passed the examination in Part 1 only (Design).

The *Ashpitel Prize* (£10 in books) and a mark of distinction for his thesis has been awarded to Mr. A. S. Reid, of Aberdeen.

Fourteen candidates failed to satisfy the Examiners.

The following candidates passed the Special War Examination:—

Messrs. C. W. Allen, L. M. Austin, G. H. Backway, W. F. Ball, H. C. Bankart, C. D. Barnard, L. J. Bathurst, S. L. G. Beaufoy, C. N. Beeston, W. Beeston, J. W. Binge, E. L. Bird, T. Blakely, A. V. Booker, H. E. Box, J. Bramwell, R. Briars, J. S. Broadbent, C. S. Brothers, W. Brown, C. J. A. K. Buysman, W. H. Caley, G. B. Carter, W. Cartwright, A. M. Chisholm, J. Clack, E. H. Cornes, G. H. Crickmay, J. H. Crowther, jun., R. S. de Burgh, A. R. Dent, C. G. Dixon, F. G. Eastwood, F. W. Eggins, J. Ellis, A. C. Fare, A. V. Farrier, A. C. Fliteroft, A. T. Flutter, L. R. Foreman, C. W. Francis, B. Fraser, E. Fryer, G. C. Gadd, C. E. George, J. S. Glass, L. R. Gower, J. Gray, H. J. Hall, L. W. Hall, M. A. Hall, J. F. Hampton, P. Hickey, W. F. C. Holden, J. Hopwood, L. C. Howitt, G. E. Hubbard, S. D. Igglesden, H. E. Jarvis, L. John, W. A. Johnson, T. E. Jones, L. H. Kemp, C. Kendall, C. W. Kennedy, H. C. Killender, G. E. King, K. Kinna, S. C. Kirby, A. S. Knott, F. H. Lambert, G. V. Lidbury, R. A. H. Livett, H. G. Lonsdale, D. A. Lumsden, J. R. A. McDonald, R. S. S. Mackay, R. M. McNaught, A. McWilliam, B. G. L. Mansergh, J. G. Marr, C. W. Milburn, J. S. Milner, W. S. Minty, S. G. Monk, H. L. Moody, F. A. Moore, A. T. Newsum, C. Noble, E. J. Nutt, E. D. O'Connor, E. C. R. Page, K. Palmer, J. R. Piggott, C. W. Pike, H. W. Pritchard, G. G. Quarmbay, D. C. Rae, A. Rankine, J. F. Rees, H. G. Riley, W. J. Rogers, D. J. A. Ross, H. A. Scott, J. C. Shepherd, G. W. Silk, E. H. Skipper, L. E. Skipwith, L. S. Slaughter, W. L. Starling, C. G. Stillman, H. J. Stribbling, S. H. Suthers, C. P. Tanner, W. L. Taylor, W. R. Templar, B. H. Toms, F. E. Towndrow, R. J. Troup, W. L. Vinycomb, H. Wessen, G. Whitaker, H. C. Wilkinson, W. P. W. Williams, S. J. Willmott, J. W. G. Wilson, M. L. Winslade, C. W. Yates, J. R. Young, T. Yoxall.

Eighty-five candidates failed to satisfy the Examiners.

A scheme of improvement on the sea front at Herne Bay, immediately opposite the Tower Gardens, is being considered by the council. The scheme provides for the erection of a sea-wall projection of reinforced concrete with two large shelters, a stage for band concerts, bathers' dressing-boxes, a refreshment room, a bathers' promenade, and other accommodation, with a roof which will form an additional upper promenade. Another feature of the scheme is an elliptical bathing pool, 450 feet long by 150 feet wide, fitted with rafts, diving-boards, and sluices. The cost of the complete scheme is estimated to be £35,000.

General Housing Memorandum No. 61

The Ministry of Health has issued the following Memorandum on Fees payable to architects in connection with State-aided Housing Schemes:—

The Minister of Health has given careful consideration to representations which have been made to him relative to the terms and conditions of payment for abandoned work as provided for in G.H.M. No. 52. While he considers the payments there authorised to be generally reasonable, he has recognised that, as between different schemes partially abandoned, the fees provided for could be more equitably apportioned in relation to the proportion of the work which is carried out; that, moreover, there are certain cases where schemes have been completely abandoned, in which the scale of payment for plans does not sufficiently allow for all the general work which may have been involved. In consultation with representatives of the Royal Institute of British Architects, the Minister has decided, therefore, that the following modifications shall be made in the terms as set out in G.H.M. No. 52:

A.—G.H.M. No. 52 refers to "plans which are abandoned after approval by the Minister." This applies also to the present Memorandum; it is recognised, however, that plans may have been prepared by an Architect to the instructions of a Local Authority, which have not been approved by the Minister, or even submitted for approval; and that the Architect may be entitled to payment for them. Provided the instructions to prepare plans were properly given for an extent of work and number of houses not exceeding those with which the Local Authority had been authorised to proceed, and that the work was abandoned with his approval, the Minister is willing to consider whether these plans are of a character which would have been approved had they been submitted, and what payment can be allowed to be charged to the Housing Assisted Scheme Account in respect of fees for such plans.

G.H.M. No. 52. II.—ROADS AND SEWERS.

B.—For sub-clauses (i.) and (ii.) of Clause 1 the following will be substituted:—

- (i.) If the preliminary scheme of roads, drains and sewers based on contour levels has been prepared, the proportion of the scale of fees, set out under the heading "B"—"Roads and Sewers," in G.H.M. No. 31—to be paid shall be $\frac{1}{2}$
- (ii.) If, in addition, the roads have been pegged out and the levels taken for sections the additional proportion to be paid shall be $\frac{1}{2}$
- (iii.) If, in addition, the sections have been set up in accordance with the levels taken and embodied in the working drawings of Roads and Sewers the additional proportion to be paid shall be $\frac{1}{2}$
- (iv.) If, in addition, Specifications and Bills of Quantities have been prepared, and all the work necessary for the purpose of obtaining tenders has been done, the additional proportion to be paid shall be $\frac{1}{2}$

Total proportion $\frac{1}{2}$

For Clause 2 the following will be substituted:—

In all cases of partially abandoned schemes the fees payable for the abandoned work shall be three-quarters of the fees indicated in (i.), (ii.), (iii.) and (iv.) of the preceding paragraph according to the circumstances of the particular case.

G.H.M. No. 52. III.—HOUSE PLANS.

C.—Sub-section (c) shall be amended as follows:—

In so far as plans were prepared prior to July, 1921, the fees shall be calculated on an assumed average cost of £700 for all types of houses. In the case of plans prepared in or after July, 1921, the fees shall be calculated upon the average price at which tenders were approved by the Minister for the types concerned during the month previous to that in which the scheme was abandoned, but in no case to exceed £700.

D.—For paragraph 3 there shall be substituted the following:—

- 3. (a) In the case of partially abandoned schemes the fees shall be a fraction of those payable in the case of schemes totally abandoned, according to the proportion of the work abandoned. The fees set out in paragraph 1, sub-paragraphs (i.) or (ii.) of Section III. of G.H.M. No. 52 shall be multiplied by a fraction calculated as follows:—

- (i.) For the purpose of the calculation, the work in any scheme of an Architect or Panel of Architects shall not be deemed to include

more than 250 houses; any cases involving more than that number shall be treated as if they had comprised 250 only.

- (ii.) The denominator of the fraction shall be the total number of houses for which plans were prepared by the Architect or Panel of Architects on the definite instructions of the Local Authority, provided that plans for that number were approved by the Minister and they are shown on an approved large scale lay-out plan, but limited by the maximum of 250 as above.

- (iii.) The numerator shall be the number by which the number of houses in the denominator as defined in (ii.) exceeds the number of houses erected.

- (b) In any partially abandoned scheme in connection with which an Architect has prepared plans for a greater number of houses than 250, there shall be paid, in addition to the fees arrived at in accordance with (a) above, for any separate designs prepared for the abandoned portion, and not utilised for the portion erected, one-half of the scale fees allowed for such designs under subparagraphs (i.) and (ii.), paragraph 1 of Part III. of G.H.M. No. 52.

E.—The following additional clauses shall be added to G.H.M. No. 52, Part III:—

4. In all cases in which the Royal Institute of British Architects satisfies the Minister that an Architect has been commissioned to carry out a housing scheme and has prepared plans approved by the Minister, but that no houses have been erected from his plans on the housing scheme of any Local Authority for which he has prepared plans, the following scale of payment for house plans will apply instead of that provided in G.H.M. No. 52, and the Local Authorities concerned will be notified by the Minister as to the amounts payable:

- (a) For preliminary negotiations with the Local Authority and the Ministry, and for preparing sketch plans and all other general work incidental to the abandoned scheme, payment will be made to each Architect on the following scale, based on the number of houses for which plans were prepared by him as defined and limited in paragraph D. 3 (a) above:—

For the—

| | | | | |
|-------|-----------|------------------|-----|------------|
| First | 12 houses | the fee shall be | £10 | per house. |
| Next | 60 | " | £3 | " |
| " | 178 | " | £1 | " |

Maximum No. 250

- (b) If all the work necessary for obtaining tenders for houses has been completed, an additional fee of £26 will be paid for each separate design approved by the Minister for which working drawings have been made.

F.—In all cases before payment of fees, the Local Authority should be satisfied that the Architect has properly carried out the instructions of the Council and the requirements of the Ministry, and that all the work covered by the respective stages has been done.

G.—The foregoing terms and conditions will not apply in any cases where an agreement providing specifically for abandoned work has been made or where a final settlement has already been arrived at between the Local Authority and the Architect prior to the date of this Memorandum. If the Local Authority have made any such agreement or final settlement without the approval of the Minister, the terms of the agreement should be notified to the Minister.

G.H.M. No. 52.—GENERAL.

H.—The last paragraph of G.H.M. No. 52 shall not apply to abandoned work on house plans. Both for the purpose of calculating the fee and ascertaining the proportion abandoned, the work of the individual Architect or Panel of Architects for each Local Authority shall be taken to be a scheme.

SUPPLEMENTARY.

I.—Travelling Expenses:—

In Memorandum to Housing Authorities 51/D, reasonable travelling expenses are allowed to an Architect in respect of journeys over 25 miles from his office. In cases

where, although the journeys may be less than 25 miles from his office, an Architect is involved in unusual expense owing to the Site or Sites being situated more than three miles from a railway station, and not served by any other regular public means of conveyance, the Minister will be prepared to allow as a charge to the Housing (Assisted Scheme) Account the reasonable out-of-pocket costs necessarily incurred in travelling from the nearest railway station to the Site.

K. In cases where no Bills of Quantities have been provided and the Architect has been required to supply the necessary extra copies of drawings and specifications from which to obtain tenders, allowance shall be made for the reasonable out-of-pocket charges incurred for the purpose.

L.—Owing to the doubts which have existed as to the application of the provisions of G.H.M. Nos. 4 and 31 in regard to abandoned work, payments to Architects have in some cases been delayed. In view of the further information contained in this Memorandum, Local Authorities should make prompt settlement or substantial payments on account in respect of the amounts payable to their Architect for professional services rendered.

Correspondence.

County Hall.

To the Editor of THE ARCHITECT.

SIR,—May we draw your attention to an incorrect statement in connection with your article on page 67 of your issue of 28th in regard to the electric lifts for the new County Hall? It is therein stated that the whole of the lifts for this building were manufactured and installed by the Express Lift Co., including three passenger and 13 goods lifts. We are sure you have overlooked the fact in making this statement that we have supplied five large electric passenger lifts for this building; two of these are arranged to carry 42 cwt. at speed of 250 feet per minute, and three lifts to take 24 cwt. at 250 feet per minute. The three smaller lifts, in addition to the control from the car in the usual manner by an attendant, are fitted with a system of dual control, so that by means of a change-over switch the operation can be altered to the full automatic system, enabling the lifts to be operated by passengers themselves after busy hours when the attendant is not available.

We feel sure you will allow us to point this out.

Perhaps you would also allow us to mention that the lifts for the Cunard steamer "Laconia," described in the same issue, and for the sister ship "Franconia" are being supplied by us.—Yours faithfully,

H. HARMSWORTH, Director.

54 & 55 Fetter Lane, (For Waygood-Otis, Limited.)
London, E.C.4.

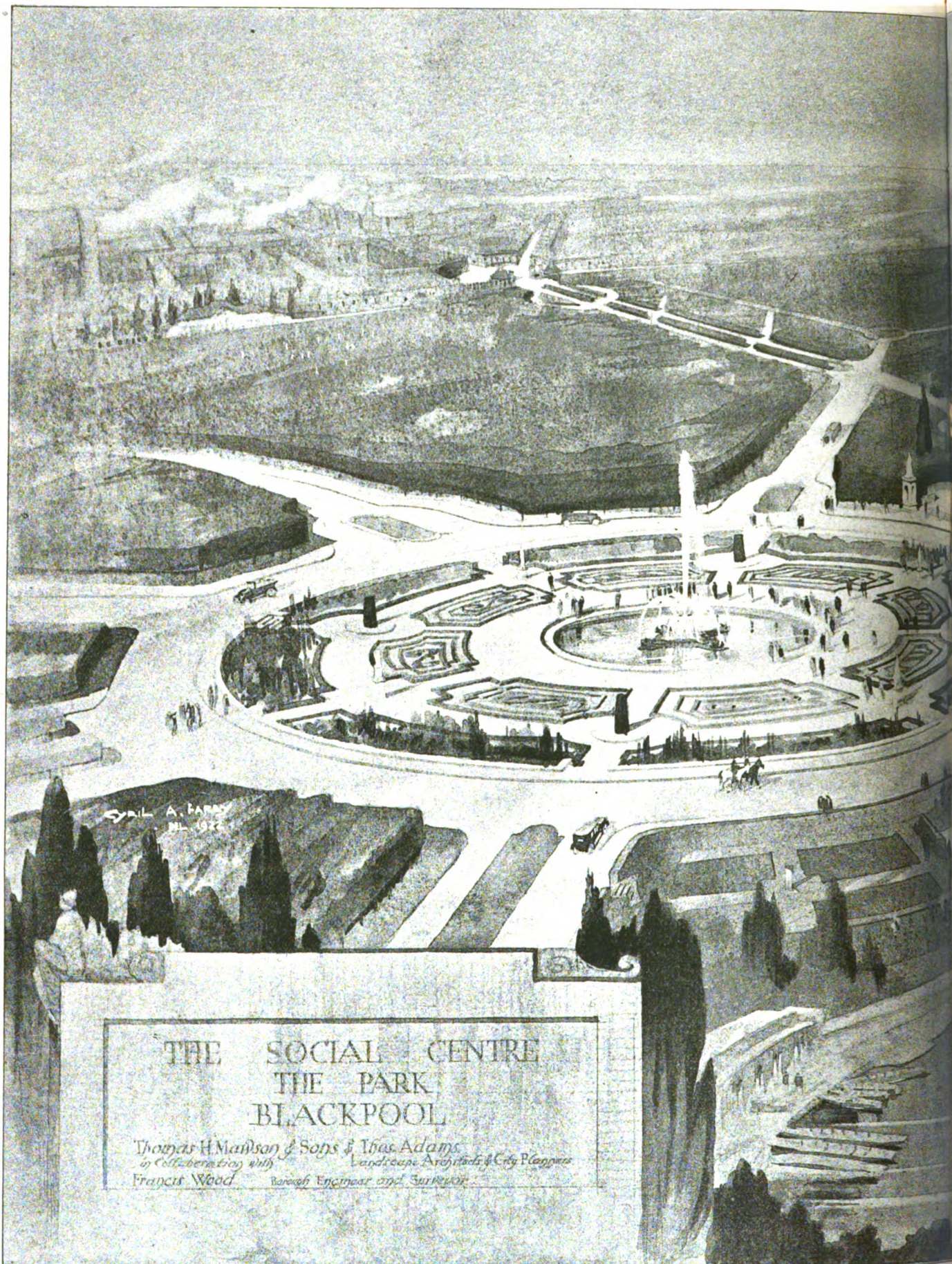
The Borough Engineer for Southwark, London, S.E., has prepared plans for extending the Town Hall at an estimated cost of £25,924. The Labour Borough Council approve the project.

The Criterion Restaurant, London, W., is to be enlarged at a cost of about £200,000, to cover the now vacant site at the south-east corner of Piccadilly Circus. A new roof garden, grill room and banqueting hall will be included in the extension.

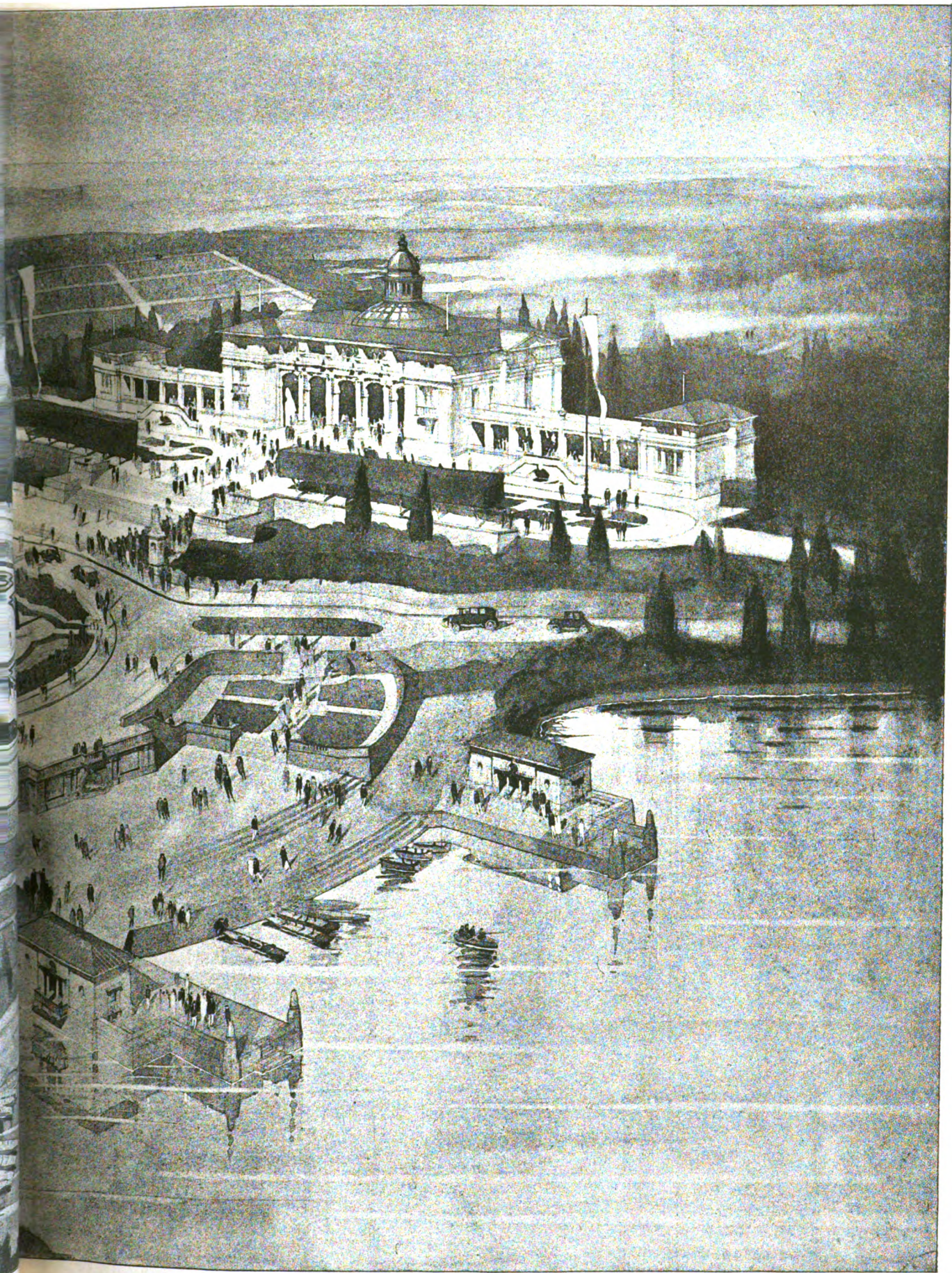
The question of the removal or the repair of the M'Lennan Arch at the entrance to Glasgow Green, which has been the subject of considerable controversy since the Corporation, a month ago, decided by a majority of two to demolish the Arch, is to be reopened. At a meeting of the Parks (North) Committee on the 28th ult., letters were read from various organisations interested in the preservation of this link with Old Glasgow, which is almost the only example of Adam architecture in the city, and in view of the representations made it was agreed that the committee should reconsider the whole matter.

Mr. George Beaumont, A.R.I.B.A., whose death has taken place in America, was a Leeds man, and at one time was well known in Yorkshire architectural circles. In 1869 he was articled to Mr. Stephen Ernest Smith, F.R.I.B.A., who then practised in Park Row, Leeds, and now lives in retirement at West Park. Quite early he displayed the talent which later won for him the gold medal of the Leeds and Yorkshire Architectural Society for a drawing of the chancel arch in Adel Church. About thirty-eight years ago he went to Chicago, where he practised very successfully at 25, North Dearborn Street, and in course of time became the president of the architectural society in that city. About eighteen months ago he decided to retire and live on his fruit farm, situated on the eastern shore of Lake Michigan. Mr. Beaumont was about seventy years of age.

THE UNIVERSITY OF CHICAGO PRESS

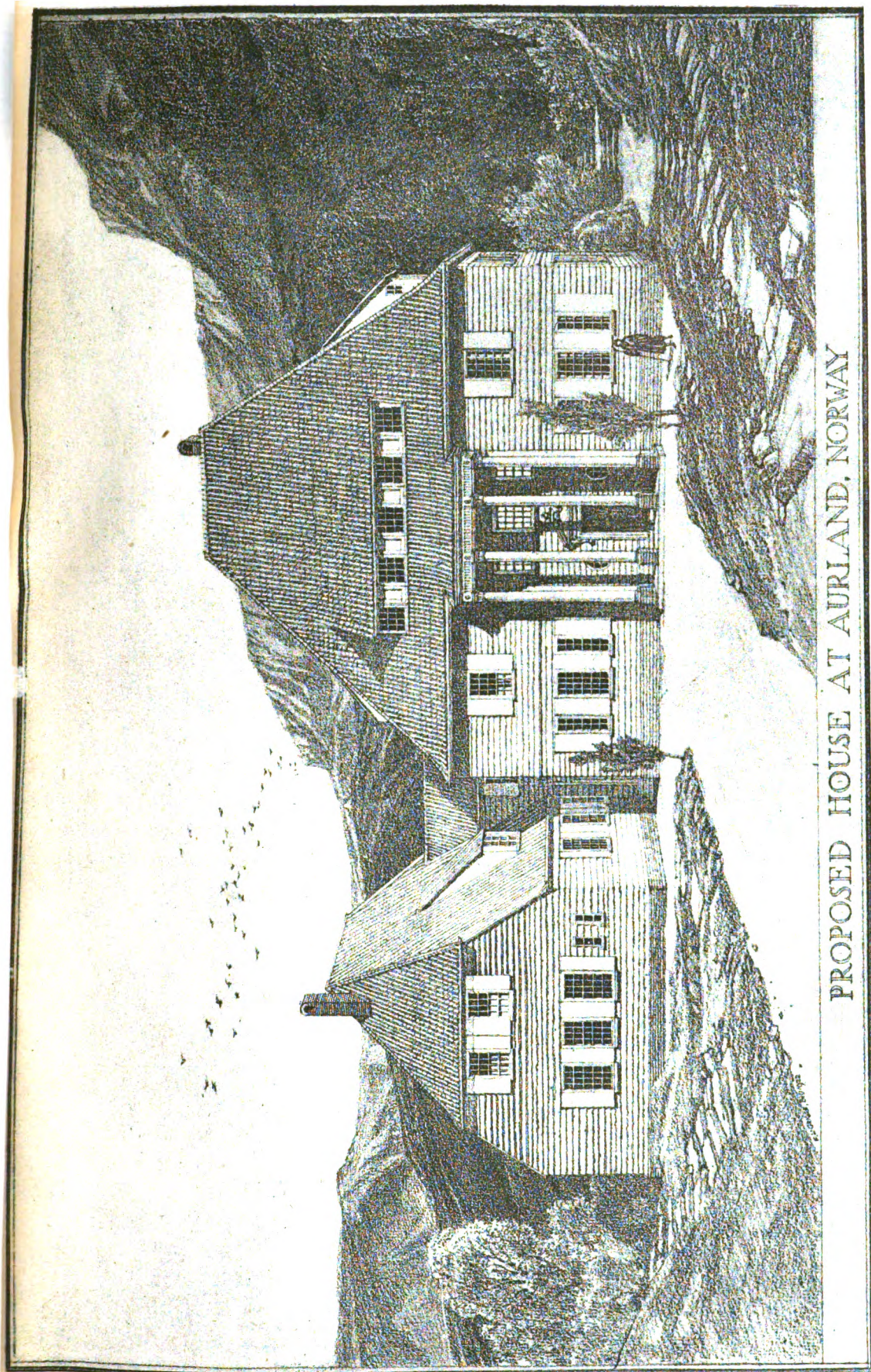


AUGUST 4th, 1922.



"INK PHOTO" SPRAGUE-HAYCOCK (PRINTERS) LTD 69 & 70, DEAN STREET, LONDON, W.1

PARK, BLACKPOOL.
THOMAS ADAMS, ARCHITECTS



H. S. GOODHART-RENDEL ARCHT.

F. J. CHICCO, DET.

PROPOSED HOUSE AT AURLAND, NORWAY



INK PHOTO: SPRAGUE HAYCOCK (PRINTERS) LTD 55 & 70 DEAN STREET LONDON W.1

PROPOSED HOUSE AT AURLAND, NORWAY.

H. S. GOODHART-RENDEL, ARCHITECT.

Architectural Association.

The annual prize giving of the Architectural Association was held in the Library at 34-35, Bedford Square, W.C., on Thursday, the 27th ult. There was a large attendance of members and friends.

Mr. Stanley Hamp, A.R.I.B.A., the new president, in opening the proceedings, said they were there to do honour to the students, and particularly to the prize winners, for their school work. There had been a very strenuous twelve months, and he was quite sure that when the work was inspected it would be agreed that the students deserved the highest congratulations for their efforts. The Association was honoured that afternoon in having with them their distinguished friend, Sir Reginald Blomfield, and also Lady Fletcher and Major Harry Barnes, M.P. Mrs. Wintringham, M.P., who had promised to propose the vote of thanks to Sir R. Blomfield, had been prevented at the last moment owing to a Committee meeting in the House of Commons. It would be well to mention first of all the question of the A.A. Scholarships. There was unquestionably a very fine list of prizes and many very valuable scholarships. He would particularly refer to the "Henry Holloway" Scholarship, which was due to the generosity of Sir Henry Holloway, a good supporter of the A.A. It was a very valuable one and was available for two years—six months at least of which must be spent in a builder's yard. Those present who were practising architects would realise what a valuable experience the latter provision would be for anyone choosing architecture as a career. There was also a new Scholarship to be available next year which would be called the "Bernard Webb" Scholarship. It became possible through the generosity of a very old A.A. friend, and its £300 would enable the winner to spend twelve months in Rome. In addition there were the "Henry Jarvis" and "Henry Saxon Snell" Scholarships. All these were of enormous interest and value in the education of the students. It was hoped there would be keen competition for them. Mention ought to be made of the many valuable Scholarships available elsewhere. A criticism had sometimes been passed upon the A.A. which, although partly true, was due to a want of knowledge of what was attempted there. It had been said that students leaving the School after three years' training did not make very sound assistants. The Council were conscious of that fact. But their hope was that all students would remain for the fourth and fifth years' courses, which were the climax of their training and most important to the success of the whole. All so doing would be equipped with the knowledge and training which would render impossible the criticism just referred to. The Architectural Association School possessed a very efficient and very capable staff, who were nearly all practising architects. The Council believed this latter qualification to be most important. It was unquestionably of great value to have over the students men who were actually meeting every day the difficulties which those students would have to face. There were, however, disadvantages. As the private practice of those masters grew they became lost to the A.A. This year the school was losing three. Mr. R. A. Duncan was leaving them because of his increase in practice. Mr. Gordon Hake was about to take up an important position as head master of the Bristol School, where he would carry on the high traditions of the A.A. They were also losing Mr. G. G. Clark, the master of the Third Year Course, who was popular with the students and had done so well. They all knew that the success and reputation of the A.A. School belonged very much to the initiative of Mr. Robert Atkinson, the Director. During the last term Mr. Atkinson had been laid up through a very severe operation. During his absence his duties had been performed by Mr. Howard Robertson, the Principal, who had proved himself to be the right man in the right place. Then there was Mr. Yerbury, their indefatigable secretary, who was gifted with marvellous organising powers and initiative. Mr. Yerbury was the hub of the A.A. wheel, and it was to be hoped that he would long remain so.

Sir Reginald Blomfield, R.A., F.R.I.B.A., in a short informal address to the students, said it was many years since he first had the pleasure of visiting the school of the Architectural Association. He had been delighted that afternoon after a very short inspection of the work the students had been doing, and he congratulated them on what he had seen. The school seemed to have entirely recovered from the difficult conditions of the war. He had heard a rumour that there was a movement on foot to break up the school system and to revert to the old system of pupillage. That would be a ridiculous thing to do. Twenty-five or thirty years ago he and some others got together and went into the question of education. They then came to the deliberate conclusion that the old pupillage system was out and did not fulfil its purpose for the students. There seemed indeed some justification for Dickens's portrait of Mr. Pecksniff and his office. So they

got together and drew up a syllabus and threw their weight into the scale in favour of an architectural school. The development since had been quite extraordinary. Schools all over the country were doing splendid work. He was convinced that the organised training given in them, the contact of student with student, was the best possible means of training young architects for their future. But he was going to make himself unpopular after saying that by making some criticisms. Some of the seniors found they could not get in a school of that sort what they got under the old system. In the old days one went into an architect's office and had an opportunity of writing specifications and preparing working drawings which the builder could understand. It was different with a student from the schools. On the other hand, the latter ought to be able to pick up that practical knowledge in two or three months and have behind him a fund of theory and good training. The other criticism was that schools must tend to stereotype a certain manner of design. There was really no justification for that if they realised that such a type was only a part of the grammar and the necessary mechanism of their training. It seemed to him after his hurried observation of the work of the students that there was rather a tendency for them to mistake the means for the end. He particularly referred to the magnificent drawings and watercolour work, which had very little to do with architectural design. Students ought to ask themselves what they came there to do. Presumably they came to learn planning and construction and the technique of their art. It was waste to devote too much time to very elaborate drawings and would not give them a real mastery of the art of architecture. One might say "Seek ye first the Kingdom of Heaven, and all these things will be given ye." Another point was the study of old buildings. Forty years ago all the keen young men would devote infinite pains and trouble to the study of old buildings. He himself, although extremely fond of cricket, never touched a bat during his first five years after leaving Oxford. Their object was the critical analysis of those structures, not the mere sketching of bits that could be copied later. It was only by the incessant study of old buildings that a facility could be acquired. Mr. Norman Shaw used to deplore the absence of a knowledge of antiquity. It was only that knowledge which could save the coming generation from more of those distressing things which were to be seen every day in the streets. If they studied the history of architecture they would find a main high road running through it all. Nowadays the practice of architecture had become so complicated it was impossible for any one to master in his own person all the various knowledge that would be necessary to practise. Goethe had said that to succeed one must limit oneself. It was wiser to collaborate in these matters of applied science with the specialists, and for the architect to devote himself to the proper purpose of his art. The architect was not the same as the engineer. He went on after the other had stopped, and transformed the engineer's data into forms of æsthetic value. The problems before an architect were extremely difficult: that was why it was both the most difficult and the most splendid of the arts. An architect had to compose for the whole orchestra and to conduct it as well. Such was the ideal students should put before themselves. The reward would be in the growing mastery of their art and a realisation of all the best faculties that lay in them.

Lady Fletcher proposed a vote of thanks.

Major Harry Barnes, M.P., F.R.I.B.A., in seconding, explained that Mrs. Wintringham, M.P., had asked him to express her deepest regret at being unable to be present at a school where women were standing on the same floor, passing the same examinations, and receiving the same diplomas as the men. Presumably, when the Council asked him to sit on the same platform as Sir Reginald Blomfield, they were fond of antitheses like Hogarth's "Idle and Industrious Apprentice." The students had in front of them not only the bright example of Sir Reginald, but also an awful warning in the person of himself. If the students lacked industry, they might one day have the awful fate of becoming members of Parliament. He was certainly on their Council, though most conspicuous by his absence. But one could not be associated in the slightest degree with a school like theirs without acquiring a great respect for it. It was the leading architectural school in the country, which meant in the world. When architecture was confined to men it had been a very strenuous occupation; now that women had been admitted it would be only the very fittest who would survive. Judging by the list of awards, what the men lacked was staying power. In the first, second and third years they made a fair show; but in the fourth and fifth they were almost out of it. It must be in the long run in the best interests of the profession to have the two sexes

side by side. There was no institution in the country which was doing more to make a great profession than the Architectural Association.

The vote of thanks was carried by acclamation.

Sir Reginald Blomfield, in a brief reply, said he wished the School would shoot more rather for the Prix de Rome Scholarship. He felt sure there were some who could win it. The Faculty felt there was not enough competition from the A.A., and they wanted to have that reproach removed from London.

Mr. Howard Robertson, the Principal, before announcing the awards, spoke a few words in explanation of the School Diploma, which was being given for the first time in its proper form. It was their highest award and was given only after really meritorious work and stiff examination. They wanted the students to be

proud of it and to use the title in the same way as other qualifications open to them. As regards the medal presented annually by the Société des Architectes Diplômés par le Gouvernement, this was consequent on a visit by French architects a few months ago, when they decided that the standard was sufficiently high to warrant the giving of such a medal. The French standard was very high indeed, and those who received the Government diploma were very well trained. The medal showed that the French society had looked at the A.A. and found the school good.

The prizes were then distributed by Mrs. Stanley Hamp.

Hon. H. A. Pakington proposed a vote of thanks to Mr. and Mrs. Stanley Hamp.

Mrs. Stanley Hamp said a few words in reply, and the meeting terminated.

SCHOLARSHIPS AND PRIZES.

1922.

| | | | | | Value. | | | |
|---|----|----|----|----|--------|----|----|------------------------------------|
| | | | | | £ | s. | d. | |
| PUBLIC SCHOOL ENTRANCE SCHOLARSHIP | .. | .. | .. | .. | 63 | 0 | 0 | J. V. Hamilton (Charterhouse) |
| OPEN ENTRANCE SCHOLARSHIP | .. | .. | .. | .. | 63 | 0 | 0 | Not awarded |
| A.A. ESSAY PRIZE. Open to all Students | .. | .. | .. | .. | 10 | 10 | 0 | Not awarded |
| FIRST YEAR COURSE: | | | | | | | | |
| First Prize, "Howard Colls" Travelling Studentship | .. | .. | .. | .. | 15 | 15 | 0 | R. C. Erith |
| Second Prize, Books | .. | .. | .. | .. | 5 | 5 | 0 | D. A. John |
| Art Subjects | .. | .. | .. | .. | 3 | 3 | 0 | M. Tha Tun |
| General Progress, Books | .. | .. | .. | .. | 2 | 2 | 0 | D. H. Beaty-Pownall |
| Scholarships tenable for one year in Second Year Course | .. | .. | .. | .. | 63 | 0 | 0 | E. T. Nash W. E. Palmer |
| SECOND YEAR COURSE: | | | | | | | | |
| First Prize, A.A. Travelling Studentship | .. | .. | .. | .. | 26 | 5 | 0 | W. Lewis |
| Second Prize, Books | .. | .. | .. | .. | 10 | 10 | 0 | F. E. Bennett |
| Art Subjects, Books | .. | .. | .. | .. | 5 | 5 | 0 | F. E. Bennett |
| General Progress, Books | .. | .. | .. | .. | 3 | 3 | 0 | F. E. Green |
| Scholarship tenable for one year in Third Year Course | .. | .. | .. | .. | 63 | 0 | 0 | J. W. Wood |
| THIRD YEAR COURSE: | | | | | | | | |
| Holloway Scholarship | .. | .. | .. | .. | 150 | 0 | 0 | Hon. H. A. Pakington |
| First Prize, "Henry Florence" Travelling Studentship | .. | .. | .. | .. | 50 | 0 | 0 | R. E. Enthoven |
| Second Prize, Books | .. | .. | .. | .. | 21 | 0 | 0 | H. Braddock |
| Third Prize, Books | .. | .. | .. | .. | 15 | 15 | 0 | Miss J. E. Townsend |
| General Progress, Books | .. | .. | .. | .. | 5 | 5 | 0 | G. Whittaker |
| "Alec Stanhope Forbes" Prize for best colour work during year, Books | .. | .. | .. | .. | 5 | 0 | 0 | R. E. Enthoven |
| GRADUATE COURSES—FOURTH AND FIFTH YEAR: | | | | | | | | |
| R.I.B.A. "Henry Jarvis" Scholarship | .. | .. | .. | .. | 50 | 0 | 0 | J. C. Shepherd |
| Scholarship from Fourth Year for one year in Fifth Year Course | .. | .. | .. | .. | 31 | 10 | 0 | J. C. Shepherd |
| Design.—First Prize | .. | .. | .. | .. | 6 | 6 | 0 | Miss I. M. Chambers |
| Second Prize | .. | .. | .. | .. | 4 | 4 | 0 | Miss E. G. Cooke |
| Decoration.—First Prize | .. | .. | .. | .. | 6 | 6 | 0 | Miss E. G. Cooke |
| Second Prize | .. | .. | .. | .. | 4 | 4 | 0 | Miss I. M. Chambers |
| Town Planning.—First Prize | .. | .. | .. | .. | 6 | 6 | 0 | Miss E. G. Cooke |
| Second Prize | .. | .. | .. | .. | 4 | 4 | 0 | E. Sheppard |
| Construction.—First Prize | .. | .. | .. | .. | 6 | 6 | 0 | Miss E. G. Cooke |
| Second Prize | .. | .. | .. | .. | 4 | 4 | 0 | J. C. Shepherd |
| Architectural Association Diploma.—On satisfactory completion of Five Year Course | .. | .. | .. | .. | .. | .. | .. | Miss E. G. Cooke W. A. Devereux |

Medal presented annually by the Société des Architectes Diplômés par le Gouvernement to the best Diploma student of the year

Miss E. G. Cooke

At the last meeting of the London County Council the chairman of the Improvements Committee stated that no notice had been received from the South-Eastern and Chatham Railway Company as to the rebuilding of Charing Cross Bridge. The time limit for the execution of the works was August 2, 1924.

Surrey County Council have accepted the report of the county engineers of Surrey and Middlesex stating that it was impracticable to widen Richmond Bridge, but the Council declined to take any action on the report, which recommended the construction of a new bridge lower down the river.

The Birmingham War Memorial Committee have accepted the tender of Messrs. John Barnsley & Sons, amounting to £23,966, for the erection of the Hall of Memory. Clearance of the site has already been commenced. Mr. Albert Toft is to execute four large symbolical figures in bronze to be placed at the four corners of the building. The committee have also considered the preparation of the Roll of Honour, containing the names of approximately 11,000 Birmingham men, which it is intended to place in a special shrine in the interior of the building.

Mr. Henry Berney, A.R.I.B.A., of Croydon, is among the new Deputy Lieutenants for Surrey.

The minutes of the proceedings of the New Zealand Institute of Architects' annual meeting, held on February 15 last, show that a resolution was passed calling upon the Institute to set up a Professional Defence Committee on the lines of the Society of Architects' Professional Defence Organisation.

The first meeting of the R.I.B.A. Registration Committee was held on July 24 at No. 9 Conduit Street, W. The following appointments were made:—Mr. A. W. S. Cross (vice-president), chairman; Mr. George Hubbard (vice-president) and Mr. C. B. Flockton, vice-chairmen; Mr. Sydney Perks, hon. secretary. A sub-committee, consisting of Mr. A. W. S. Cross, Mr. George Hubbard, Mr. C. B. Flockton, Mr. Sydney Perks, Mr. W. Gillbee Scott, Mr. Herbert Shepherd, and Major Harry Barnes, M.P., was formed for the purpose of considering the various Registration Bills that have been promoted, interviewing representatives of other bodies, and submitting suggestions to the Main Committee.

Royal Archæological Institute. Summer Meeting—II.

In our issue of last week an account was given of the visits paid by the Royal Archæological Institute on July 20, the opening day of their Summer Meeting, for which Ripon served as headquarters. The morning was devoted to the Minster. After lunch, motor charabancs brought the large party to Kirby Hill Church, The Devil's Arrows and Aldborough. In the evening a paper was read by Mr. A. Hamilton Thompson, M.A., F.S.A., entitled "The Cistercian Order in Yorkshire."

SECOND DAY.

A motor drive was taken first to

MASHAM CHURCH.

Like many other local townships, Masham made generous provision for its one-time all-important market by grouping itself decorously along three sides of a wide and long open space—which is much more rectangular than square—with narrow streets leading off. The effect is dignified, though when empty one rather misses the cosy neighbourliness of the usual country High Street. In this case the parish church lies behind the short eastern side and a little out of centre, so that an opportunity for a fine termination to a vista has been allowed to escape.

Mr. H. B. McCall, F.S.A., who acted as guide here and at other places, wisely adopted the rule of beginning his account by a halt to examine some of the exterior features. At Masham the first point was the imposing western twelfth-century tower, which rises without buttresses to a fifteenth-century octagonal lantern and one of the very few spires in Yorkshire. A close scrutiny of the masonry reveals the fact that this early tower was erected subsequent to the immediately adjacent nave walling, which at first glance would be taken for two centuries later. That is to say, portions of the original aisleless church survive to which this square Norman tower was afterwards attached. A drum or lantern carries the spire: both are octagonal. The lantern has belfry openings on its four cardinal sides; and the diagonal sides, which are borne on squinches, are each gracefully buttressed from the angles of the tower so as to distribute the slight thrust of the spire as equally as possible. The main part of the church seems to have been entirely rebuilt c. 1330. As Mr. McCall pointed out, there is scarcely a church in Yorkshire which does not exhibit either reconstruction or extensive additions between 1330-1349. When Edward III. was established on the throne, after the weak reign of Edward II., arts and commerce and the accumulation of material wealth went ahead by leaps and bounds. This great era came to an abrupt end in the year of the Black Death, 1349, which in the bleak north (then without coal or iron mines) made its influence felt for nearly a century. As late as 1436, Richmond in Yorkshire had to be excused certain taxes on the ground that its inhabitants had not yet recovered from the effects of the pestilence.

This church doubtless suffered, like others in Yorkshire, from the Scottish raids which recurred at intervals from 1296 to 1320. In 1318, after Bannockburn, the Scots penetrated almost within sight of the walls of York. Ten years later Sir Geoffrey le Scrope, prominent alike as a jurist, a diplomatist and a soldier, obtained a grant of market and fair at Masham together with free warren in all his lands. To his influence is probably due the rebuilding of the church. Its unusual plainness seems to indicate a desire to get as much accommodation as possible for the funds at disposal.

Under the chancel arch hangs the upper portion of a painting of the "Nativity," by Sir Joshua Reynolds, which was partially destroyed by fire, along with 18 others, at Belvoir Castle, in 1816. The east ends of the North and South aisles have been appropriated as the private chapels of the Wyvill and Danby families, between which the Barony of Scrope is in abeyance. In the northern chapel is a notable Jacobean monument with effigies of Marmaduke Wyvill, his wife and children, erected in 1613. The southern chapel has a less interesting memorial dating from 1737 to Sir A. Danby. Within the rails are several frag-

ments of Anglian crosses. In the churchyard, by the south porch, is a considerable stone fragment with bands of primitive carving in four courses which Mr. McCall described as part of a cylindrical pillar or column, but which is usually talked of as a Saxon cross. The design he considered to be certainly pre-Norman, and probably pre-Danish. In the North there were no Saxons as in the South. Up to the tenth century, Yorkshire history was Anglian, and then Anglo-Danish.

JERVAULX ABBEY.

A writer in the "Gentleman's Magazine" for 1805 thus describes a visit to this beautiful and sequestered spot: "I attempted at something like a general plan, or a slight recovery of the monastic pile, but with little success. I began my lines on the west, by the side of the road leading to Middleham. On the right and left heaps of ruins; suppose here was the great gateway; advancing came to ruins; suppose the refectory, running east to west, 116 feet in length. On the right or south of these relics, many masses of edifices; perhaps the abbot's lodgings, the monastic offices, etc. Willing to try at an elevation, I here and there particularised some doorways, half-buried archways in the walls; many windows also came under my observation, but in such a mutilated condition that I was at last compelled to give up my survey, having made not the most distant trace of the church."

This writer came just too soon. In the next year the ruins were cleared by the then owner, the Earl of Ailesbury, and there were important excavations as recently as 1906.

Jervaulx Abbey was first founded in 1145 by the Cistercians from Savigny at Fors (higher up Wensleydale), who by arrangement with the monks of Byland in 1156 came to the present site near the River Ure. From that stormy beginning the monks prospered until at the Dissolution it was described as "one of the fairest churches ever seen." The dismantled abbey, like so many others, became a quarry for the neighbourhood, and is greatly in ruins. The plan is nearly the same as at Fountains and other Cistercian houses. In a way Fountains and Jervaulx supplement each other, the parts specially ruined in one being, in some cases, better preserved at the other. Amongst the more interesting features of Jervaulx are the chapter house, monks' dormitory range, abbot's chapel, misericorde, meat kitchen, monks' infirmary (two-storied), and (in the church itself) north transept altar with its five consecration crosses. The church, which is little smaller than the contemporary Ripon Cathedral, is cruciform, 270 feet long, and consisted of a nave of ten bays with aisles, a choir of four bays, transepts with eastern aisle of two bays, and a Lady Chapel with five altars. All that is left are a few bases of piers and the wall foundations, on which have been neatly placed a vast number of fragments.

Rev. Canon Garrod, before commencing a tour of these beautifully situated ruins, made some interesting remarks on the characteristics peculiar to this great Order. In the other Orders, he pointed out, the menial work was performed by servants of the lower ranks: among the Cistercians, however, the lay brothers or conversi who did the shoe-making, tailoring, bread-making, and so on were of equal social rank with the monks, but they were unable to read and could never become monks. The conversi had fewer services. It is important to remember that monks were not priests as a rule. They were only a certain few who rose to that rank. Cistercian monasteries were built round a cloister. The lay brothers' quarters always stood on its west side, while those for the monks might be on the south or the east. It was always easy to get one's bearings as to the lay-out of a Cistercian establishment by going to the cloister. On the north side almost always came the church. There were certainly one or two instances where the lie of the land rendered desirable an alteration of these conventional arrangements.

Perhaps at Jervaulx, according to Canon Garrod, the most interesting feature is the misericorde. At any rate there was nothing so extensive at Fountains. The Cister-

cians were particularly severe in the matter of food. The staple diet consisted of bread and two courses of vegetables taken separately. As time went on it proved to be impossible to maintain that rigour in the English climate. First the sick were permitted a more generous diet. In 1335 a regulation was issued by which meat was allowed twice a week. Then it became three times. At Jervaulx there is a large apartment which would have been impossible in the early stages—namely, the meat kitchen, with two huge fireplaces and ingle nooks. But the meat was never allowed to be eaten in the public refectory; it had to be taken to the misericorde.

Mr. Hamilton Thompson, F.S.A., who was called on for a few words, spoke particularly of the lay-brothers who formed a characteristic section of the inmates of a Cistercian monastery. These lay-brothers, though occupied in handicrafts in consonance with the stress put by the Cistercians on the discipline of manual labour, were men of good family. Mr. Hamilton Thompson expressed the view that the lay-brothers became a feature of monastic life, not in the parent house at Cîteaux, but at the monastery of Thiron, in the diocese of Chartres, the system spreading thence to Savigny, and through that church's influence became very widely adopted. Jervaulx was originally founded at Fors as an abbey subordinate to Savigny, and it was one of the fifteen English, Scottish, and Irish abbeys which were transferred from the rule of Savigny to the Cistercian Order in 1147, so that the system at Jervaulx was derived directly from Savigny.

It was unfortunate that the rain began to fall with considerable vigour shortly after the party's arrival at these ruins, which can offer at best only horizontal protection. The time-table had allotted 75 minutes to the abbey. Though it proved insufficient for those who wanted both to listen to the guides and afterwards make personal investigation, the whistle of the secretary blew inexorably at 12.30. A short journey brought the charabancs to Middleham, where lunch was taken.

MIDDLEHAM CASTLE.

The guide book states that the town of Middleham "is clean and open, and is well known as the headquarters of many racehorse owners, whose horses are exercised on the moor above between 6 and 7 a.m." But it is the sport of making kings and not the sport of kings which provides the archaeological interest, for here stands the imposing shell of a castle which was the favourite residence both of Warwick the King-Maker and his son-in-law, Richard III. A quarter of a mile away across fields may be seen some earthworks representing a motte and bailey stronghold founded late in the eleventh century by Ribald Fitz-Eudo, the first feudal lord of Middleham. His grandson abandoned the timber castle and erected, c. 1160, a huge rectangular donjon with walls averaging 12½ feet in thickness. It is one of the largest in Europe, and formed the nucleus of the fourteenth-century castle built by the Nevills of Raby and Middleham. About 1230 the barbican tower was added, which both strengthened the defence and provided space for a larger chapel. The place fell out of favour with the owners, and remained unaltered until about 1350, when Ralph, second Lord Nevill, set about adapting it to accord with the fashionable ideas of a fortified commodious residence. Instead of demolishing the great donjon he enclosed it within the courtyard of an entirely new fortified house. The work seems to have been spread over forty or fifty years, with the result, as Mr. W. M. F'Anson pointed out to the party, that a castle which in 1340 was an out-of-date, purely military stronghold, surrounded by a comparatively low wall, became by the end of the fourteenth century one of the largest and most stately baronial residences in the North of England. After the death of Richard III. the castle fell into disrepair. Both Henry VIII. and Elizabeth proposed to conciliate the people of Yorkshire by making it their North Country home. In 1604 it was granted to the Lindley family. Thirty years ago the vast ruin was sold to the first Lord Masham, whose family have done much excellent work in the way of preservation.

The basement, *i.e.* the ground floor, of the donjon was a room 84 feet long by 25 feet wide, which served as a store for the winter food. Accommodation had to be provided on a huge scale, as during the autumn all oxen, sheep and pigs were slaughtered, except a few kept for breeding purposes, because there was practically no winter stuffs to feed them on. The flesh was cut up into callops and preserved in tuns of brine, or salted and hung. On the floor above was the noble great hall with the usual dais at one end and the screens with gallery at the other. The kitchen occupied the basement adjoining the store, with a beer cellar, a storeroom and a wine cellar opening one into the other. The floor immediately overhead was given up to unusually generous private family apartments. In order to facilitate cross-communication between the various blocks two covered timber galleries or gangways were thrown across the courtyard in mid-air. The Prince's Tower at the south-west angle is termed "the nurse" in the survey made by order of Henry VIII., and appears to have been given up to the children of the family and their immediate attendants. Edward, Prince of Wales, the only child of Richard III. and Queen Anne Nevill, died in this tower. Mr. F'Anson mentioned that when visitors are brought to the "Windsor of the North" they sometimes make disappointed comparisons with the royal Windsor. But any such must be unfair, inasmuch as Windsor is to-day very largely a modern palace, with huge ranges of quite modern apartments. Middleham, on the other hand, remained a purely feudal castle with probably nothing later than 1300, and is now a grim and somewhat gloomy ruin.

WENSLEY CHURCH.

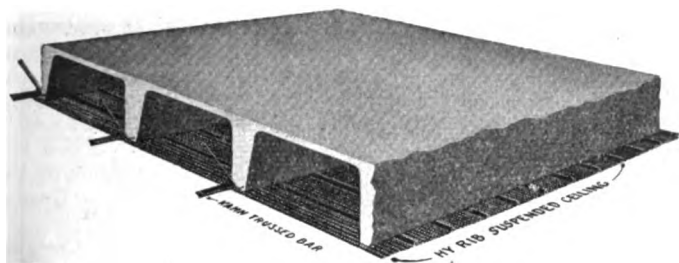
On arriving at this interesting church Mr. H. B. McCall piloted the party round the exterior to show the magnificent series of sculptured shields of arms on the buttresses which support the aisle walls. These buttresses appear to have been extended in the second half of the fifteenth century so as to reach a little above the parapets. Instead of terminating as pinnacles they are finished square with embattled coping. Set within shallow niches are the armorial shields of the various great families with which the Scropes of Bolton were allied by marriage. All the shields, we were told, work out correctly genealogically as well as heraldically. They were carved after the marriage of ex-Lord Chancellor Scrope to a De la Pole in 1447, and before that of Henry, Lord Scrope, to Elizabeth, daughter of the Earl of Northumberland, in 1480.

Wensley is, said Mr. McCall, pre-eminently the home of pre-Norman sculptured stones. There are nine now preserved; many may have been lost, and others may yet remain undiscovered in the walls. The stones in evidence extend from the eighth century (if not earlier) until the eleventh, and indicate that the place was an important centre all through the so-called Saxon times. Two very fine Anglian stones taken out of the chancel walls in 1904 exhibit no Scandinavian influence whatever. The early church associated with these Christian memorials is believed to have occupied the site of the present nave, and may have endured until the existing chancel was added about 1250 and the aisles some fifty years later. The east window of the chancel with its five lancets grouped under an enclosing arch and divided only by mullions is noticeable as being one of the few examples of plate tracery (as distinguished from bar tracery) in the North of England.

This church is also famous for its carved woodwork. The remarkable screens enclosing the family pew of Bolton Hall were brought from Easby Abbey at its dissolution in 1535, and, judging by the heraldry, may date about 1510. There are, in addition to two inscriptions round the cornice, numerous armorial shields with the names of the bearers carved above them in very charming Gothic letters, recording the pedigree of the Scropes in a similar but more elaborate manner to those carved in stone on the buttresses outside. The open front or south side of the pew, dividing it from the nave, is in the Renaissance style of the period of James I., and is worked in red pine. Although forming a very strongly marked contrast with the Gothic work of the rest of the screen brought from Easby, the character of

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this south front is, said Mr. McCall, very good, the design being purely classical and not too heavy or cumbersome. The chancel stalls exhibit some fine carving. An inscription on them stating that they were provided by Rev. Henry Richardson, rector, in 1527, is arranged curiously in a series of shields on the face of the stalls, each one of which contains one or more letters of the sentence which runs round. There are eight stall ends, a different animal being carved beside the poppy head in each case. The chancel screen is a pleasing example of fifteenth-century woodwork, recently repaired, where necessary, in a very skilful way. Near the north door is a cupboard or aumbrey with a money box attached, which may date from c. 1400 or later. Of heraldic glass little has survived. The parish registers commence for all classes of entries in 1538.

In the chancel Mr. McCall described what he considers to be the very finest memorial brass in any parish church in England. It is of the Flemish school, and of the best period, viz. the third quarter of the fourteenth century. The design differs from that of foreign brasses in general in that the figure stands alone and is not surmounted by a canopy. The ecclesiastic represented is vested for Mass in alb, stole, chasuble and maniple. A chalice is depicted on his breast. The brass is believed to be a memorial of Sir Symon Wensley, rector of the church from 1361 to 1394, and to have been bought by him about 1370. This ecclesiastic was a man of eminence and character.

(To be continued.)

"The Architect" Fifty Years Ago.

AUGUST 3, 1872.

AYRTON, THE EMANCIPATOR.

Lord Stanley of Alderley, in the course of his speech on the case of Dr. Hooker, said "that Mr. Ayrton succeeded in emancipating the Parliament houses from the lien established upon them by the architect, under the rules of the Architects' Trade Union, and thereby saved a large portion of the public money!"

Competition News.

The Bournemouth Borough Council, on the 28th ult., decided on advertising the competition for plans for a pavilion, on a site at the pier approach, to cost £100,000. Premiums of £300, £200, and £100 are to be offered. Accommodation is to include a large licensed refreshment room, fitted for entertainments, tea balconies, billiard and rest rooms; also a hall with accommodation for 2,000 and a stage.

Members of the Society of Architects are requested not to take part in the competition for rebuilding Newmarket Hotel, Bury, without first ascertaining that the conditions have been approved by the Council of the Society.

The Second Hampstead Tenants Ltd. invite competitive designs for the lay-out and erection of a group of 90 labour-saving flats on a site in Hampstead Way, near Golder's Green Station. Premiums will be awarded as follows: For the design considered by the assessors to be first in order of merit £500, second £300, and third £200. The assessors are: Mr. L. Rome Guthrie, A.R.I.B.A., Mr. John C. S. Soutar, Lic.R.I.B.A. (architect to the Hampstead Garden Suburb Trust Ltd.), Mr. Edmund J. Cooper, secretary, Second Hampstead Tenants Ltd. All designs to be submitted on or before January 31, 1923. The design placed first will be adopted in accordance with the conditions of the competition. Application for the conditions of competition must be made not later than August 11, and addressed to the Secretary, Second Hampstead Tenants Ltd., Temple Fortune House, Hampstead Way, N.W.11.

The Council of the Chelsea Hospital for Women, Arthur Street, S.W.3, propose to invite not more than twelve architects to submit designs, in competition, for their proposed Nurses' Home (some 100 bedrooms, etc.) to be erected in the Hospital grounds. Premiums of £150, £100 and £50 will be paid to the authors of the designs placed first, second and third respectively. The Council have appointed Mr. Henry V. Ashley, F.R.I.B.A., to draw up the conditions and instructions of the competition, and to adjudicate thereon. Architects willing to compete are requested to send in their names to the secretary on or before September 16, 1922, together with their qualifications.

The Middlesbrough Town Council has appointed a committee to go into the scheme for a proposed technical college for Teesside. A local gentleman, who offered to give £40,000 for the purpose a few years ago, is anxious for it to proceed.

Tenth International Congress of Architects.

The Tenth International Congress of Architects will be held under the auspices of the Société Centrale d'Architecture de Belgique in Brussels from the 4th to the 11th September, 1922, and will be accompanied by an International and a National Retrospective Architectural Exhibition.

It will be remembered that the outbreak of the war interrupted the preparations for the Tenth Congress of the regular series which was to have been held in Petrograd in May, 1915, under the patronage of the late Tsar.

The Société Centrale de Belgique will be celebrating the fiftieth anniversary of its foundation at the time of the Congress, and the architects of Belgium extend a cordial invitation to their foreign colleagues to join them in the celebration.

The Congress will include delegates from many foreign countries. The Belgian Committee is under the chairmanship of M. J. J. Caluwaerts, with M. R. Moenaert as Secretary.

PROGRAMME.

4th September.—Morning. Meeting of the Permanent Committee of the International Congress of Architects.—2 p.m. Formal opening in the Palais des Academies. Evening reception.

5th September.—10 a.m. Opening of the Architectural Exhibition in the Palais d'Egmont.—2-6 p.m. Conferences. Evening, Receptions.

6th September.—9 a.m. to noon. Visits to buildings of interest in Brussels.—2-6 p.m. Conferences. Evening, Receptions.

7th September.—Visits to the devastated zone, stopping at Ypres, and spending the night at Bruges.

8th September.—Visits about Bruges, returning to Brussels in the evening.

9th September.—Excursion to Antwerp, visits about the city and up the Scheldt.—2-5 p.m. Conferences, returning to Brussels in the evening.

10th September.—9 a.m. to noon. Visits to the Exposition. 2-6 p.m.—Conferences. Evening Receptions.

11th September.—10 a.m. Closing exercises.

SUBJECTS FOR DISCUSSION.

1. The responsibilities of the architect.
2. Schedule of charges.
3. The appointing of State and Municipal Architects.
4. The rights of authorship of the architect.
5. The profession of architecture: its aims and its rights.
6. Women Architects.
7. Public, National, and International competitions. The position of the winning architect in an International competition, or of one working in a foreign country.
8. Town planning.
9. Small houses.
10. The influence of locality on architecture.
11. The preservation of historic monuments: with consideration of their economic, hygienic and social aspects.

EXHIBITIONS.

An Architectural Exhibition will open 5th September in the Palais d'Egmont, lasting two weeks.

It will be divided in two general classes:—(a) Belgian: 1, Retrospective; 2, Contemporaneous. Jury—Messrs. Maukels, Mercenier, and Van Montfort. (b) Foreign. There will be as many sections as there are countries represented.

DUES.

The dues for members will be fifty francs: for ladies accompanying members (wives and daughters only) thirty francs, which will give them the privilege of visits, excursions, and receptions.

LANGUAGE.

Official delegates may address the meetings in their own language. The official language of the Congress will be French, though any other language may be used, provided a *résumé* in French is submitted at the same time.

BRITISH ARCHITECTS INVITED.

All British Architects are cordially invited to take part in the Congress.

All those desiring to attend to or to receive further information should communicate with the R.I.B.A. Secretary, 9 Conduit Street, W.1.

The Douglas (Isle of Man) Corporation is embarking on an electric lighting scheme to cost something like £100,000. An order for the main station plant has been placed with Messrs. Ruston and Hornsby, Lincoln. The engines to be supplied are two Ruston twin cylinder cold starting oil engines, each of 340 b.h.p., arranged to drive continuous current dynamos. The installation is to the specification of Messrs. Handcock and Dykes, Consulting Engineers, 11 Victoria Street, London, S.W.1.

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Some Reflections on Wren's Centenary.

Next year it is proposed to commemorate in a suitable manner the termination of the second century which has elapsed since the death of Sir Christopher Wren, that greatest of our architects if we are to judge by the works he has left behind him.

For William of Wykham, Bishop Hugh of Lincoln, and other of the great names associated with our mediæval history were not architects in the modern sense of the word, but parts of the system under which building was carried out by master builders or organisers and craftsmen, while Inigo Jones, Wren's greatest predecessor, was singularly unfortunate in that he lived in difficult and unsettled times, when few of his projects were carried to completion. Wren's reputation is thus securely founded on actual evidence which we to-day see before our eyes, while the fame of Jones depends on a number of unexecuted designs, the uncertain association with a number of relatively small works and on the masterpiece of the Banqueting Hall in Whitehall—the only executed portion of the projected royal palace which was carried out.

Whether had fate been more propitious he would have left a reputation greater than that of Wren must remain an unsettled problem of a nature dear to those who are fond of speculation over possibilities.

The fame of Wren rests not on the scheme he hastily produced for the reconstruction of London, and not on the numerous buildings in London alleged to have been designed by him, but on St. Paul's and the City Churches, Chelsea Hospital and part of Greenwich Hospital, as well as buildings in different parts of the country which are definitely known to be his work. We do not assume that all of them were designed and carried out in all their detail by Wren himself, for it is probable, if not certain, that he rather indicated the general lines on which many smaller works should be dealt with than actually designed and supervised them. Tradition was fortunately in his day a living force, and such general directions often sufficed to produce the ordered regularity and fitness which is one of the great features of good architecture which must to-day necessitate the design of every detail as well as close supervision at the hands of an architect. What an architect of to-day leaves to others is generally done in the wrong manner; what he left to the craftsmen and joiners of the age of Wren was usually done in a way which completed and carried out the architect's scheme.

We are confronted at the present time with the necessity of spending great sums of money on securing the fabric of St. Paul's, money which at the present time it will be very difficult to raise by subscription, but money without the command of which the fabric of the great masterpiece of Wren's genius may be endangered. We have also recently had the report of the Bishop of London's Commission on the City churches, which has advised the partial or complete demolition of 19 churches because they are neither wanted for ecclesiastical purposes nor considered of sufficient architectural merit to deserve preservation.

It is generally admitted that the number of scheduled churches include many which, by reasons of architectural merit, should be preserved, but we believe that those who do not allow themselves to be swayed by pure antiquarianism will admit that the smaller half of the number could be sacrificed without architectural loss to London. The question of ownership has proved a thorny one, and one which should surely be capable of decision at the hands of some legal authority. Whether the ownership is vested in the Church, the ratepayers of the parish in which the buildings are situated, or of the nation, is a point which should be legally made clear. This being done, would it not be possible to appoint another commission which should consider the Bishop of London's Commission's report and give an unbiased opinion on the architectural merit of the buildings concerned? And if, as we confidently expect, such a commission came to a unanimous decision that some of the churches and sites might be sold, would not the Church, the ratepayers of the parishes concerned or the nation concur in the opinion that part of the money obtained should be employed for the preservation of St. Paul's by carrying out the structural repairs required? We believe all would agree so far, and the question of ownership once determined it would then be for the owners to expend any surplus as they thought fit.

We say without hesitation that it is absolutely absurd to suppose that, were Wren now living, he would regret the demolition of such churches as St. Clement's, Eastcheap, and All Hallows, Lombard Street. We do not know the circumstances which governed the design of these buildings, but believe that in all probability stress of work forced Wren to hand such buildings over to the care of subordinate workers after he had determined their main outlines, and that they would be more fairly described as the work of a builder's foreman who had received general directions from a busy architect. If we so regard them, judging them by their intrinsic merit and having regard for their uselessness as churches to-day, there is little reason why they should not be sold.

It is common knowledge that the decision to demolish old St. Paul's was very unwillingly made; it is probable that enough remained of the old structure to make its restoration possible. Had it been restored we should have preserved the traditions of the old cathedral at the cost of having a building patched by "Gothic work" of the Wren period, like that of St. Michael, Cornhill, and St. Mary, Aldermanbury. We should have been left, in addition, with an insecure structure, the upkeep of which would have cost enormous sums, and we should never have had Wren's cathedral. We mention this because it is an instance of what we might have lost had modern ideas of preservation and restoration had weight in the time of Wren. We should have lost the best work of his epoch with the doubtful advantage of retaining a crippled edition of an earlier building. So, in our time, we may deface the

page of contemporary architectural history if we yield to antiquarian counsels.

Let our regard for the memory of Wren be shown, not in preserving works with which he had probably little to do, but in keeping his best and doing our best in our day as he did in his.

Let us also, if we understand and appreciate what he did, clear his best churches in the City of London of

the horrible additions and decorative adjuncts of the worst periods of the Gothic revival, and let us, as far as possible, see that these churches, as well as St. Paul's, are put into an absolutely sound and perfect condition structurally. If we did this we should, it seems to us, more fittingly show our regard for history and association than by pursuing a policy of *laissez-faire* and unreasonable conservatism.

Our Illustrations.

OFFICES OF AUSTRALIAN MUTUAL PROVIDENT SOCIETY, KING WILLIAM STREET, E.C. THOMPSON & WALFORD, Architects.
PALAZZO DORIA TURSI, GENOVA. Drawn and measured by P. D. HEPWORTH.



This building occupies a large corner site in King William Street and Clements Lane, E.C. It has a frontage of some 76 feet to King William Street and 86 feet to Clements Lane. The position is a very prominent one.

Opening direct on the Bank of England, King William Street is now one of the most important thoroughfares in the City of London, and the greatest insurance centre in the world. Many buildings in the street are occupied by leading Insurance Offices or are in process of rebuilding for the same purpose.

The main front of the Society's building is executed in Portland stone. It is carried up to the limit permitted by the London Building Act, and is suited in all respects for the purpose for which it is required.

The building is fireproof and constructed on steel frame principle, this giving open floors throughout, which can at any time be divided off as desired. There is adequate central heating throughout the building with an electrically driven

installation for ventilation and the Sturtevant system for pneumatic cleansing.

There are in all ten floors. Three of these floors—viz., the ground floor, the lower ground floor and the basement—will be occupied by the Society. The remaining seven floors are let off on a long lease to an important banking institution. The highest floor is given over for lavatories, etc.

The entrance and staircase are spacious, with two electric passenger lifts from the basement to the highest floor.

The chief rooms in the part of the building to be occupied by the Society are fitted and finished as follows:—The walls of the main office are panelled in mahogany, with marble columns and pilasters. The room for the manager and the office fittings throughout are also of mahogany. The floor covering of the public space is in rubber. The windows have bronze frames, the glass being double to silence traffic.

The board rooms, etc., are on the lower ground floor, as is also the doctors' suite. The remainder of this floor contains the principals' lavatories, cloak rooms for male and female clerks respectively, kitchen, store rooms, etc. The strong rooms, heating chamber, storage space for fuel, etc., are on the lowest floor.

There is great and increasing demand for offices in this street, and this building has been so designed and constructed that a further two floors above the present height can be added.

It may be of interest to mention that when excavating for the foundations old wells were found, with fragments of ancient timber and pottery. To ensure a solid bottom for the massive piers, the excavations had to be carried down to nearly fifty feet below the street level.

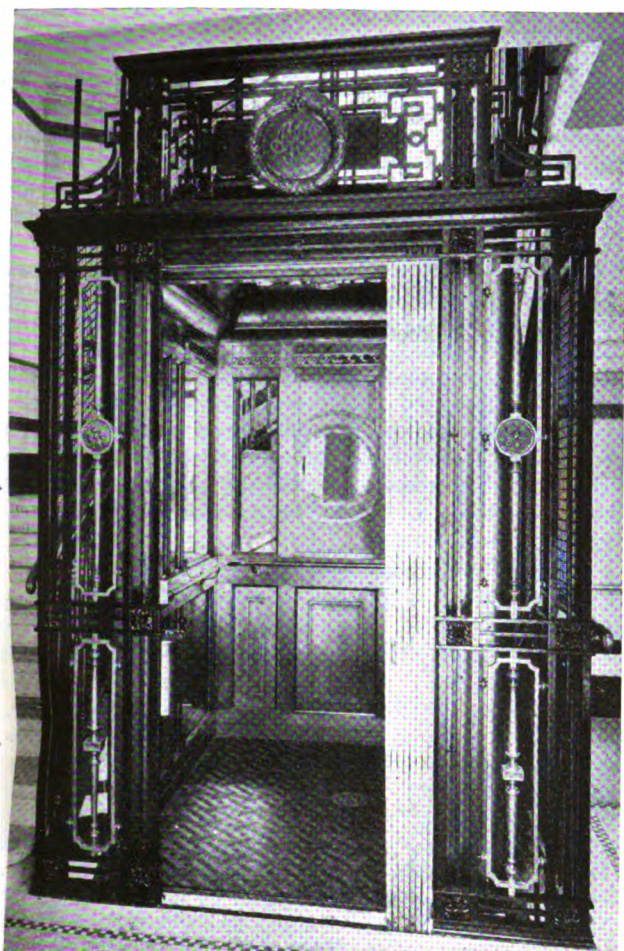
The architects are Messrs. Thompson & Walford, and the principal contractors Messrs. Ashby & Horner.

Notes on the Decorative Schemes.

In examining the decorative schemes of the Board Room and of the General Offices one has to consider how far they are the outcome and expression of existing conditions. The Board Room, for instance, is situated in the basement, with none too much light and none too much height. The method of heating demands that there be a number of large panels finished in plaster, this material being one of the most efficient media for the distribution of heat. The room, too, must be suitable and must reflect the high purpose for which it is used.

The solution of the problem gives us panelling in light-grey sycamore, divided into bays. Each bay has a large central heating panel in plaster covered with a wax-surfaced paper and flanked by narrow panels in sycamore. All the sycamore panels are veneered "quarter-wise," and the wood everywhere is highly figured. The chimneypiece is an old one in white-and-green marbles. Above the panelling is a frieze in white plaster. The ceiling is also in white plaster, and the enriched band and enriched centres are decorated in colour. This colouring is of the most delicate description, and treats the floral enrichments decoratively rather than naturally. The electric-light fittings and the door furniture are in oxydised silver. The glass bowls to the ceiling fittings are grey-green in colour, the desired effect being obtained after many experiments. All the metal-work was specially designed. The treatment of the leaded glass tells of the care taken to preserve the harmony of the room's decoration. The ante-room is treated in exactly the same way as is the Board Room. Both rooms are the exclusive work of Messrs. H. H. Martyn & Co., Ltd., of Cheltenham.

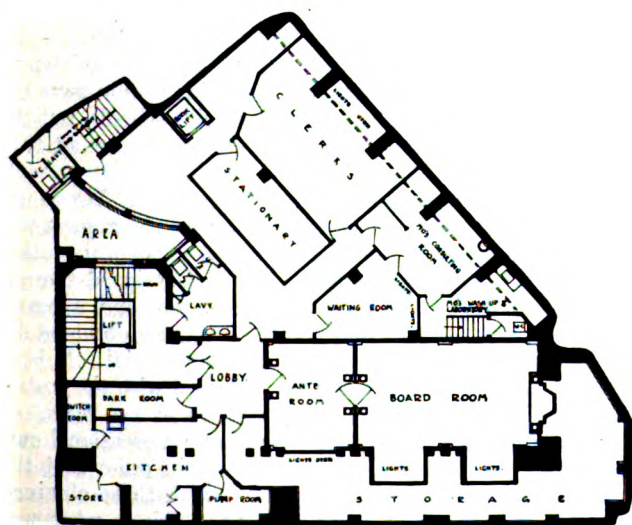
In the General Offices and the Manager's room existing conditions again give to the decoration its ultimate expression. It was not practicable to solve the heating-scheme problem by providing large plaster panels, so a method with another medium, marble, was introduced. The green marble of the bulk-heads and the black marble bordering the floor are the distributors of heat. Here, in contradistinction to the Board Room, there is almost an excess of height, and the daylight is all that can be desired. Again, in contradistinction to the Board Room with its quiet



and restful atmosphere, the character of the General Offices was desired to be somewhat arresting, to have something of the sumptuousness, the swagger even, of Bond Street. The panelling is in mahogany wax-polished; the panels are veneered "quarter-wise." The frieze panels have applied to them carvings in lime-tree. A feature to be noted is the treatment of the various clocks: one is enclosed in a floral surrounding of modelled plaster, another in a carved mahogany case, while that in the Manager's room consists of ivory numerals inlaid in one of the panels and ivory hands applied thereto. The columns and pilasters are of green Scagliola surmounted by Ionic caps in plaster bronzed. The ceiling is richly decorated. The domed ceiling of the Manager's room is worthy of notice; so, too, is the electric-light pendant with its bowl of Derbyshire alabaster. The whole of the work described above, with the exception of the Scagliola columns and pilasters, was carried out by Messrs. H. H. Martyn & Co., Ltd., of Cheltenham.

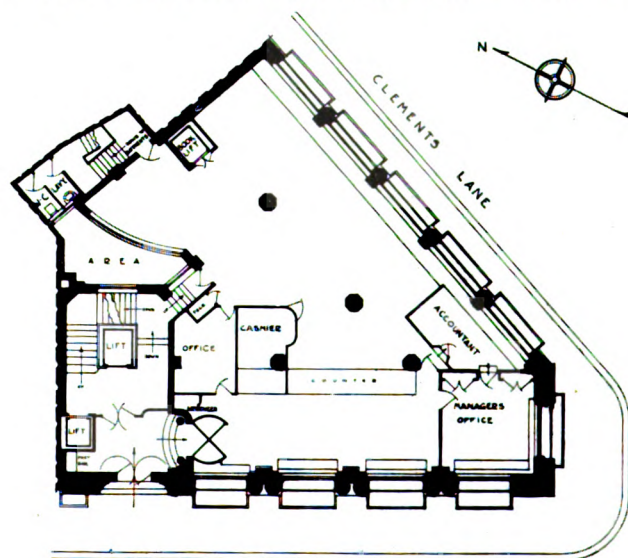
Messrs. Martyn are also responsible for the plaster work and electric-light fittings to the entrance, to the staircases, and to the vestibule to Board Room. The treatment of the soffits to the staircase flights shows an interesting method of dealing with varying sizes and shapes. A ceiling which is unique in modern work is that to the vestibule leading to the Board Room group. Here is a modelled representation of the building, showing its location in the City of London; the City churches of St. Clement, of St. Edmund the Martyr, and of St. Michael, Cornhill, appear in the background.

We are informed that the general contractors were Messrs. Ashby & Horner, Ltd., 8 Aldgate, E.1. The constructional steelwork was carried out by Messrs. Redpath, Brown & Co., Ltd. Messrs. Williams, Gamon & Co. (Kaleyards), Ltd., Chester, made and fixed all the steel and bronze windows, the former being of an elaborate pattern, with ornamental mouldings, in accordance with the architects' designs. The door furniture was supplied by Messrs. W. & R. Leggott, 90-96 High Holborn, W.C.; Messrs. Waring Withers & Chadwick are responsible for the artistic electric light fittings, the boardroom being specially happy in its lighting arrangements. Messrs. Stevens & Adams supplied and fitted the flooring parquetry and wood blocks. Messrs. George Wright, Ltd., 19 Newman Street, W., supplied the grates and chimney-pieces, also the antique mantel in the boardroom shown in our illustrations. The pavement lights were made and fitted by Messrs. J. A. King & Co., 181 Queen Victoria Street, E.C.4. Marbello, Ltd., 64 Finsbury Pavement, E.C.2, supplied the composition floors. The lift enclosures in iron and bronze, staircase railing, handrails and tenants' name tablet in the hall were manufactured by the Bromsgrove Guild, Ltd., Bromsgrove, Worcestershire, and are in keeping with all the decorative features of the building. The strongroom doors are by Messrs. Chubb & Sons; the Carrara ware by Messrs. Doulton & Co., Ltd.; tiles by Messrs. Carter & Co. (London), Ltd., 29 Albert Embankment, S.E.11. Messrs. T. B. Colman & Sons, Ltd., 53 King Street, Brighton, supplied a fine revolving door leading into the general offices. Over the main entrance appears the crest of the Company, modelled in full relief by Mr. P. G. Benthon, R.B.S., on a transome supported by columns. This, as well as the bronze doors, name-plates, inner screen and bronze counter grill in the main office, were made by Messrs. J. W. Singer & Sons, Ltd., of Frome, Somerset. Messrs. The Art Pavements & Decorations, Ltd., St. Paul's Crescent, Camden Town, carried out Biancola wall linings with marble bands to the staircase, Biancola treads and risers to the same and Biancola posts: the whole colour effect of the staircase is very pleasing indeed. The paving and partitions to the lavatories were also by this firm. The Leyland and Birmingham Rubber Co., Ltd., 24-30 Duke Street, E.C.3, supplied the rubber tiling, which is a material of which the scope for variety, both in design and colourings, is unlimited. The very effective columns and corresponding pilasters are in "Tinos" Scagliola marble, by Messrs. Bellman, Ivey & Carter, Ltd. The columns surround steel stanchions without showing any joint, although made as monoliths at works and cut and fixed *in situ*. Messrs. Waygood-Otis, Ltd., installed the lift, which we illustrate.



BASEMENT (SUB-BASEMENT) PLAN

SCALE 0 10 20 30 40 50 FEET



KING WILLIAM STREET

GROUND FLOOR PLAN

SCALE 0 10 20 30 40 50 FEET

Notes and Comments.

Prohibition and Art.

Mr. Pennell is usually outspoken, and in an interview given to an American paper expresses himself as follows :—

Good literature is impossible without drink, and unless something is done toward ameliorating the prohibition laws in America then art will go to the devil.

I have been suspecting its destination for some twenty-five or thirty years, for in all that time and more there has not been a noteworthy development. What's the trouble? We are being standardised and sterilised and purified and uplifted to the point of stupidity. All the originality is being taken out of us by the people who insist that life must be lived by pattern—the pattern to be devised by themselves only. There is plenty of originality and courage in the United States if the standardisers would keep hands off.

At the present time I should say that the art appreciation of the average American was about equal to the art appreciation of an Abyssinian. The average American is bored by art. We did not even appreciate Whistler, one of the shining geniuses of all times, and it was only the other day that here in New York a Cezanne sold for \$21,000 and a Whistler brought only \$7,000.

When one walks or rides about, one scarcely perceives a gleam of intelligence in the eyes of the passers-by. Everywhere about are plain signs that this country is taking the worst traits from the rather poor lot of Europeans we have been getting for a generation or so. Even women are coarsening obviously, and losing their beauty. They insisted on becoming our fellow-citizens, and what has happened? They now have the privilege of standing in the subway while the men sit.

One looks over the arts with a feeling of sadness for the little that is being accomplished. The architects have given us the skyscrapers, but that is the one beautiful thing the American architects have created.

We are inclined to agree with Mr. Pennell's dislike of an over-regulated civilisation hedged in with "don'ts."

The Architecture Club.

A new club has been formed which will be known as the Architecture Club, its membership limited to 300, to be confined to architects and to writers on architectural subjects. The executive committee includes among its members Mr. Gilbert Scott, R.A., Mr. Knott, and Sir Lawrence Weaver. At its first dinner Mr. G. K. Chesterton made the interesting and useful suggestion that some of its members should be organised as Architects of Ruin or A.R.'s, and should have the right and power to decree the destruction of any building which displeased them. This is an interesting suggestion, and one which we hope will be carried out so long as the A.R.'s are carefully and well chosen.

Limewash.

Mr. A. R. Powys, in the "London Mercury," writes in praise of the use of limewash and answers the objections raised against its use on the Abbey. He says that the old stonework needs repairing with new material, and that such new stonework would make the whole Abbey patchy, but the coat of limewash both prevents this and gives added value to the architectural lines of the building, while in addition it acts as a valuable preservative. As he says, limewash is an old material which was freely used in past centuries, as is shown all over the country, and its reintroduction is to be welcomed rather than deplored. Many small cottages which look delightful when whitened would be crude and unpleasing without the softening effect of whitewash. A difficulty in its use is that in some cases it scales off, but this is largely obviated by the mixture of freezing salt with the material used. We hope that in the near future it will supersede roughcast, which is an objectionable material which in a little time looks shabby and dingy, while, if kept in condition, it entails considerable outlay.

The London County Hall.

The August number of the "London Mercury" contains a good article on the County Hall, and with much that the writer says we are in agreement. We too regret that the original intention of carrying an open screen of columns between two projecting wings as the main feature of the

river front was abandoned. We do not agree with the writer's contention that we should abandon the use of classical forms or of the orders. But it is questionable whether the circular portion of the façade would not have looked better had the engaged columns been omitted with or without additional emphasis being given to the centre of the curved front by the introduction of columns or pilasters. The recessed front is seen at its best from one side or the other, when the curving lines contrast very pleasantly with the remainder of the front, but is not so successful when viewed from a position at right angles with its centre. The effect of the steep tiled roof is entirely happy and successful, and the building as a whole composes happily and adds a rich note of colour to the drab district south of the river. As in every great building, there is room for criticism, but it is likely that critics in avoiding some errors would have fallen into others which Mr. Knott has avoided.

The Subterfuges of the Defeated.

In replying to a deputation from the Housing and Town Planning Council, Sir Alfred Mond said that in South Wales colliery owners had made large fortunes and should provide decent houses for people they employed. Sir Alfred apparently forgets that the sliding scale has for many years governed wages in the coal trade—i.e., that when employers have been making large profits those employed have been earning large wages. If out of these wages they have not felt inclined to pay for the provision of more and better houses we do not see why the employer is bound to do so for them. No doubt the experiment which is to be tried on a large scale in the North of England by which a number of owners will supply such accommodation is a laudable one, which will, we hope, be justified by success. But neither the Government nor the workmen can have it all their own way. Mr. Harold Cox has shown that we are paying something like 400 millions a year in social experimental legislative efforts made since 1910, most of which are neither beneficial nor required. But for these and the unchecked waste of Government departments the income tax would be 2s. 6d. or 3s. in the pound less than it is. The Government cannot expect employers whose pockets have been searched as those of the Germans were to have been searched to have large surpluses from which contributions to further improve conditions can be drawn. Bailie Morton, of Glasgow, said they could expect little from the Glasgow contractors in the way of housing enterprise on account of the incidence of Imperial taxation. Look where we will, the failure of the Government is caused first by the unwisdom of their policy, and secondly by their unbridled waste of public money.

The Cardiff Architects and Schools.

The South Wales Institute of Architects have written to the City Council urging that the profession should have the opportunity of competing for the Council's schools, but the request has been refused on the well-known ground that the work can be done by the City Engineer as at present, and that architects' fees are saved by so doing. We do not know the terms of the letter sent, but hope the request was founded on the question of design rather than any other basis. If the schools are at present well designed there is little reason for an alteration in the system, but if better architectural and practical results could be obtained by competition the question of fees is not material. It is at most a question of direct fees as compared with the cost of the technical staff who at present deal with the work. A good compromise would perhaps be to hold occasional outside competitions for some of the work in order that the results so obtained can be compared with those obtained through the means of a department. This is what was done in the case of the London County Council's work, but in this case the Council's schools were in admittedly able hands, and it is doubtful whether as satisfactory a general average in design would have been obtained in any other manner.

Copyright in Art—II.

By Selwyn Brinton, M.A.

(Of the Inner Temple, Barrister-at-Law.)

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In my previous article on this subject, published in "The Architect," I treated the subject of copyright in art as affected by legislation in these islands up to the Copyright Act of 1911; and showed how by various enactments preceding that important Act copyright had been successively acquired, first for engravings, prints and lithographs (Engravings Copyright Acts of 1734 and 1766), then for works of sculpture (Sculpture Copyright Act, 1814), and lastly for paintings, drawings and photographs (Fine Arts Copyright Act, 1862).

Under this latter Act I then pointed out that an architect's plans and sketches became protected as "drawings," though upon a "sale" of plans this property ceased to exist unless it had been expressly reserved.

But under the new and latest enactment, the Copyright Act of 1911, one comprehensive phrase comes to include, and to confer copyright in, "every original artistic work"; and it becomes worth our while here to see what are the exact words which, in section I. of this Act, confer these very important rights.

The Copyright Act, 1911 (I. and II. Geo. V. Ch. 46), being "An Act to amend and consolidate the law relating to copyright," under the date of December 16, 1911, enacted that "subject to the provisions of this Act copyright shall subsist throughout the parts of His Majesty's dominions to which this Act extends for the term hereinafter mentioned in every original literary, dramatic, musical and artistic work, if:—

- (a) in the case of a published work the work was first published within such parts of His Majesty's dominions as aforesaid, and
- (b) in the case of an unpublished work the author was at the date of the making of the work a British subject or resident within such parts of His Majesty's dominions as aforesaid;

but in no other work except so far as the protection conferred by the Act is extended by Orders in Council thereunder relating to self-governing dominions to which this Act does not extend and to foreign countries."

Leaving aside the question of literary, dramatic and musical rights thus acquired, which do not in any way enter into our present survey, we have here to consider what is precisely meant by an "original artistic work," and next who are the persons who come by the terms of the present Act to acquire the rights there conferred. The Act included the United Kingdom (and under this heading still presumably includes Ireland, so far as it is possible to assume anything as to that distressful country in its present state of chaos), and also the great self-governing Dominions of the British Empire—Canada, Australia, New Zealand, South Africa and Newfoundland, and all British possessions other than self-governing dominions.

The important word "original" clearly indicates, in the expressed opinion of Mr. E. J. Macgillivray, LL.B., of the Inner Temple, that "the work must contain some substantial feature which is not copied from a previously existing work." But "if the work is derivative, and there is some novel feature which distinguishes it from the work from which it is derived, that novel feature constitutes the originality and receives protection, and the novel feature alone is protected in so far as the derivative work is concerned."

This seems fair in principle, though it might be possibly a little difficult in practice sometimes to distinguish just where this derivative quality in a work of art ended and the original began, and still more when such a quality became altered and itself the source of new inspiration and new developments. Artistic works now coming under this Act have been classed as paintings and drawings, works of sculpture, casts and models—all these having been, as we have seen, protected in some measure by previous legisla-

tion. Then we come next to two classes which have a special claim on our interest as not having hitherto received protection—these being "Works of artistic craftsmanship" and "Architectural works of art." Lastly I take engravings, etchings, lithographs, woodcuts, prints and photographs in their order as mentioned.

In section 35 of the Act we are told that "artistic work" includes works of painting, drawing, sculpture, and of artistic craftsmanship, as well as architectural works of art, engravings and photographs. It may be noted that "works of sculpture" here include "casts and models," and that "architectural works of art" mean "any building or structure having an artistic character or design, in respect of such character and design, or any model for such building or structure, provided that the protection afforded by this Act shall be confined to the artistic character and design, and shall not extend to processes or methods of construction."

A Common Law right in an unpublished work existed as a proprietary right before publication, but of course ceased on publication, when the author came under the direct protection of the existing copyright statutes. But it becomes important here to note that by the present Act, consolidating the whole previous law relating to copyright, this old Common Law right in unpublished work is expressly superseded, and the unpublished work is entitled to protection at the time of its making, provided that the author was either a British subject or resident and domiciled in one of the self-governing Dominions or possessions of the British Empire, or a subject of or resident or domiciled in a foreign country in respect of which an Order in Council had been made extending thereto the benefit of the Act.

The "author" is here the person from whom emanates the original conception and design; and publication consists in such an act, in the case of an artistic work, as delivering it to a publisher or printer, for publication, or exhibiting it in a place to which the public are admitted on certain conditions as to payment or as to prohibition of making copies of works there shown; while the word "copyright" (section I. (2)) means the sole right to produce or reproduce the work or any substantial part thereof in any substantial form whatsoever.

In a later notice I propose to deal with certain questions of infringement in copyright, and with the special measures of protection afforded to works of architecture under the present law.

Manchester Town Planning Exhibition.

The Manchester and District Joint Town Planning Advisory Committee, which is representative of over 70 local authorities adjacent to the city of Manchester, proposes holding in the Town Hall, Manchester, from October 9 to 14 next (inclusive) a large and interesting exhibition of maps, drawings, diagrams, and models illustrating town-planning work, civic and regional development, public services, etc.

A very interesting series of maps are now being prepared by the Joint Committee for the area within a 15 miles radius of Manchester indicating traffic movement, gas, water and electricity areas and supplies, drainage areas, town-planning schemes, parks and open spaces, unhealthy areas, rainfall and population maps, etc., and it is also intended to exhibit maps and models from many towns in various parts of the country.

Efforts are being made also to obtain a series of maps from American and Continental cities.

During the exhibition, which is to be opened by the Earl of Derby, a series of addresses will be given by gentlemen of outstanding authority on the various aspects of town development, reconstruction, arterial roads, and allied subjects.

The exhibition, for which Mr. P. M. Heath, the Town Clerk of Manchester, is secretary, will be open to the public free of charge, and all persons interested are invited to visit the exhibition.

Modern Methods in Building Construction.—XXVIII.

By Albert Lakeman, M.S.A., M.C.I.

CONCRETING—(continued).

The use of wagons on narrow gauge track can be very successfully applied when the whole scheme covers a large area of ground, and long lengths of foundations have to be poured and considerable quantities of concrete have to be placed for bases and floors below or at the general ground level. The method can also be conveniently worked in conjunction with an installation where chutes are used, as the loading of the wagons is facilitated. When chutes and a hoisting tower are employed in connection with a central mixing plant which is planned to cover that section of the scheme where the largest quantity of concrete will be required, it is an excellent idea to erect a receiving hopper close to the narrow gauge track at some point within reach of the chutes, and arrange for the hopper to be kept supplied from the central plant when transport by wagon is necessary. This receiving hopper will be erected above the ground at a level to give easy discharge into the concrete carrying trucks, and the latter are brought alongside and filled by the opening of a hopper gate which allows the concrete to be discharged from the hopper direct into the trucks through a short length of hinged chute. Several trucks can be filled at one time to make up a short train, which is immediately shunted to the place of deposit, where the trucks are emptied.

The wagons or trucks need to be of a special type with hopper-shaped bottoms, having a side discharge controlled by a hopper gate to allow the mixed concrete to be sent directly into the excavation or forms through wooden or

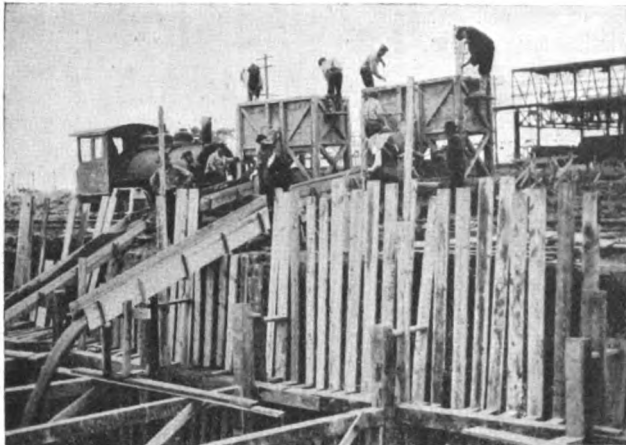


Fig. 150. TRANSPORT OF MIXED CONCRETE BY TRUCK.

metal chutes. An illustration showing the type of truck in use is given in fig. 150, where the mixed concrete is being delivered into a large excavation. In this case small steam locomotives were used, and two trains were provided which passed on a loop line between the mixing plant and the place of deposit, so that one train was being loaded while the other was discharging. The trucks were framed with timber and raised above the axles to give sufficient height for discharge, and the capacity of each one was sufficient to take easily one yard cube, which was the amount of each batch from the mixer. A journey from the mixing plant with 2 yards of concrete, the discharge, and the return journey with reloading occupied usually about five minutes, and each train therefore transported about 24 cubic yards per hour, and the two trains together dealt with 48 yards cube per hour, which was a fairly good general average output from one mixing installation. On some days the output from one mixer reached as much as 432 cubic yards in eight hours, or 54 yards cube per hour, but the organisation on the particular scheme where these trucks were used was so well planned that no difficulty was experienced in transporting and depositing this amount of material. It will be observed that small platforms were arranged at the ends of the trucks to allow the labourers to clean down any concrete which did not flow easily, and



Fig. 151. CONCRETE TRUCKS ON NARROW GAUGE TRACK.

generally assist in feeding the material towards the hopper mouth; and a small step-ladder was arranged for access to this platform, as shown in fig. 151. In this illustration the hoisting tower of the mixing installation can be seen in the distance, and it will also be noticed that the labourers are provided with long-handled hoes and rakes on either side of the chutes leading from the trucks to the place of deposit, and with these the concrete was drawn down the chutes where the angle was small and the concrete was mixed without an excess of water. This method of transport on narrow gauge tracks is an economical one, and it has several advantages over the old-fashioned method of transport by hand labour and wheelbarrow from a mixer which is being continually moved forward as the work progresses. In the first case the narrow gauge track will probably be required during the excavation work for the transport of surplus soil, and it will also be useful in the later stages of the construction for the transport of materials generally; thus the initial outlay involved in the formation of the track will be spread over a large proportion of the work. It does not require the use of a large number of men, as a force of about twenty-four in all, including drivers and runners, will be sufficient to deal with the transportation and emptying of the two trains, giving an output of 48 cubic yards per hour. This means that the output is 2 cubic yards per man per hour, or 16 yards cube per man per day of eight hours. The system is a flexible one, as the track can be moved, if absolutely necessary, without considerable expense, and new turnouts and branches can be easily installed. The number of trucks can also be varied to suit the requirements of the work or the output of the mixer, if the latter is needed to supply concrete for other sections of the scheme and the whole output is not available for the trains in one direction. The trucks can be made by carpenters on the site of operations, provided the under-carriage with axles and wheels are available, and usually these can be taken from a flat-bottom or tipping wagon which is beyond repair as regards the upper portion. The transportation is quick, and there is no danger of the initial set taking place in the concrete before deposit if the operations are kept going continuously.

When a central plant with chutes for feeding the loading hopper has not been installed, it will be necessary to raise the mixer above the hopper, or provide a low tower with an elevating and tipping bucket to the hopper if the mixer is arranged at the ground level. When two or more stationary mixing installations are provided, the narrow gauge track can be arranged to link these up and allow the concrete trains to be fed from different points as the circumstances demand, or additional trains can be put on to speed up any particular foundation work of an extensive nature which is urgently required in order that the erection of the superstructure can proceed.

Another method of transport mentioned was that of horse-drawn tip-carts, but the use of this will be very

limited, to work of small character and minor importance. It is incapable of dealing with a large output unless an excessive number of vehicles are provided, and there will also be considerable difficulty in arranging direct transport from the mixer to the place of deposit without dumping the material at a level which necessitates shovelling and rehandling. When work has to be executed on a site where buildings and roads already exist, and it is merely a question of concreting machinery foundations or work of a similar character, it is frequently advantageous to employ horse-drawn carts, especially if the roads and other buildings are in use and the laying of tracks is difficult; but this method cannot be considered as a suitable or economical one on a large scheme where extensive concreting has to be done.

The use of buggies and wheelbarrows for the transport of concrete must be considered merely as an auxiliary to the main method and appliances, because it is only suitable for short distances, and in the absence of direct chutes for pouring the concrete into the place of deposit it is a convenient method of working between the end of the main chutes and the actual concreting point. The buggy, as it is called in America, is a metal receptacle mounted on two metal wheels of large diameter in a manner which allows the contents to be easily emptied by turning the body completely over, and this piece of equipment has distinct advantages over the old-fashioned wheelbarrow. It has a capacity of about 6 cubic feet, which is equal to approximately three ordinary barrow-loads, and yet it is easily wheeled when loaded, because the whole weight is carried on the wheels and not by the arms of the workman. These buggies are known as hand tip-carts in this country, and they are made by the Ransome Machinery Co., Ltd.

An illustration of the use of buggies for transporting mixed concrete from the receiving hopper at the end of the chute to the place of deposit is given in fig. 152, where the workman is depicted when about to discharge the contents on to the surface. In the example shown the receiving hopper cannot be seen as it does not come on the illustration, but it was situated on the left-hand side, a few feet away. The circuit to give a continuous flow can, however, be noticed, as it will be seen that one man has discharged his buggy and is travelling to the hopper on the left, while on the other side of the bay which is being concreted the operatives pushing the full buggies are travelling to the right on a separate runway, which enables the continuous flow to be maintained. The runways provided for the use of these buggies are worthy of special notice, as they are a feature that could with advantage be more extensively employed in schemes where considerable concrete has to be placed in floor construction.

In the example illustrated they were arranged as one-way transverse runways and longitudinal two-way runways, and they were all portable. The top was formed with $\frac{3}{4}$ inch boarding laid transversely across 2 inch by 4 inch frames, and fixed with a small space between each



Fig. 153. RUNWAYS FOR TRANSPORTING CONCRETE.

board, these frames being in lengths which could be easily handled by two men. To keep the runways above the top of the foundation or floor they were laid upon a series of stilted cross frames about 18 inches high, as shown in fig. 153, and there was no obstruction to the placing of the concrete other than the stilted legs, which were comparatively small, and could be easily withdrawn immediately the concrete was poured in the section where they were situated. In a building several floors high these runways can be moved from floor to floor, and the initial outlay involved will be repaid several times over. The work can be executed more speedily by the use of proper wheeling runs for the men, and a much larger output will result, as the use of single plank runways, often badly arranged with defective material, only results in loss of time through the wheels of the buggies or barrows continually getting off the runway, and a much slower pace on the part of the labourer owing to the necessity for keeping on a comparatively narrow track. Some contractors may be dubious as to the attitude of the workmen in this country towards the use of buggies of large capacity when they have always been engaged on the use of wheelbarrows of the ordinary type, but the exercise of a little tact and discretion at the outset will quickly remove any prejudice, and the men will realise that the work is actually easier with these receptacles.

The author introduced a few in connection with some concreting operations in this country as a trial, and with a little persuasion the labourers tried them, and after a short while they actually asked for more, as they preferred them to the wheelbarrows, and the use became general for the transport of concrete, rubbish, surplus soil, or any other materials that had previously been handled by wheelbarrow, much to the benefit of the work, as regards cost and speed. The foregoing methods of transport are not necessarily separate and distinct from each other, because it is frequently some combination that will produce the best results. The tower and chute method must be assisted by the use of buggies if the best work is to be performed, and a combination of chutes and narrow gauge track wagons is a very general one adopted in extensive work. As regards the merits of the different methods, it can be stated that the tower and chute installation will be the quickest, cheapest, and most productive for work within about 200 feet radius of the mixer, the narrow gauge track with concrete wagons will be the ideal method for transport over long distances from the mixer to the place of deposit, and the buggy or hand tip-cart will be the best for short runs from any receiving point, such as a hopper, to the point where the material is to be placed.

The fourth and last item in the sequence of concreting operations is the placing of the material in the work. There is not a great deal of scope in this operation, because the placing of the material will be dependent on the supply at the place of deposit, and if the transport is well arranged the discharge of the mixed material will be made in a manner which obviates shovelling and rehandling on a large scale.

It is important to have sufficient men at the concreting point to deal with the material quickly and keep the



Fig. 152. TRANSPORT OF CONCRETE BY BUGGIES.

concrete from piling up, and, to avoid delay in the transport, the receptacles should be emptied and cleaned out immediately they arrive. The use of long-handled rakes and hoes for drawing the concrete along the forms or excavation will prove beneficial, as the material can be moved more rapidly than by the use of shovels.

Men working on the concrete should be provided with rubber boots, which will enable them to walk in the wet material without discomfort when it is necessary for them to work away from the dumping point, and the contractor will be repaid for the expense in the extra amount of work done.

The tamping of the concrete around the reinforcement and into the forms is the most important feature in the placing of the material, and any neglect in this respect will result in porous concrete of uncertain strength, and the appearance of the surface upon the removal of the forms will be unsatisfactory. When insufficient tamping is done and the surface of the concrete is defective, patching or plastering becomes necessary; and this not only involves extra expenditure, but in addition the appearance and weathering of the surface are adversely affected, and the architect will carefully supervise this part of the operations if he wants to get the best results. Concrete work can be executed under ordinary conditions to give a surface upon the removal of the forms which does not require any treatment whatever if the structure is one for industrial purposes and the building is designed to eliminate any facing of a different material. Even when the surface is to be treated by brushing or rubbing to expose the aggregate or introduce a colour treatment, it will be obvious that any patching of the surface will be detrimental and expensive. In tamping the concrete proper tools should be used, and these can either be purchased or made by the contractor, as they are of a simple nature and only governed by the type of work being executed. It is important to well work the wet concrete toward the outer faces, and not merely to stir up the middle of the mass, as is frequently done, and by working a thin flat metal or wooden spade down against the forms a uniform surface can be easily obtained. An interesting example of placing concrete is shown in figs. 154 and 155, where the use of metal and wooden chutes will be noticed.

This work was executed in connection with the base of a large building which was partly below ground level, and the illustration in fig. 155 shows the state of the work two days after that depicted in fig. 154. The concrete on this building was well tamped into the forms, and, although the work was executed quickly, no treatment whatever was necessary to the surface after the removal of the forms. The wooden chutes were arranged with wooden sliding gates in grooves, which controlled the flow of the wet concrete to the position required, which was naturally continually changing, and thus the metal chute only required raising from time to time. The finished concrete base to this building is illustrated in fig. 156, and it is interesting to note the long length of metal chute that was employed from the mixing installation.

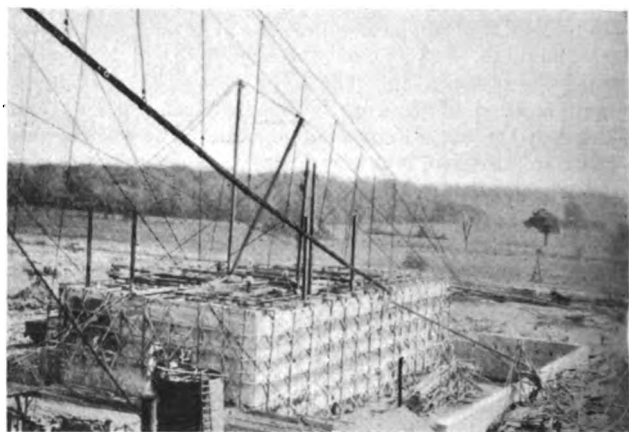


Fig. 156. METAL CHUTE FOR CONCRETE.

There is one point which is sometimes overlooked when placing concrete, and that is the provision for fixing pipes, cables, and similar features to the concrete walls and soffits. It is not always possible to determine the exact position of all these pipes, etc., in the early stages of the work, but the introduction of suitable metal inserts, which are placed flush with the concrete surface on certain parallel lines, and the placing of sleeve pieces through walls and floors for pipes, will save considerable trouble, time, and expense at a later stage when heating, sprinkler, and electrical installations are being put in. When the inserts are not exactly in position, pipes can be suspended from small angles or channels which span the space between two inserts, and when alterations are required or adjustments become necessary no difficulty will arise. A little foresight in such matters as this will make a considerable difference in the cost and quality of the work, and the benefits gained will be shared by the building owner, the architect, and the contractor.

(To be continued.)

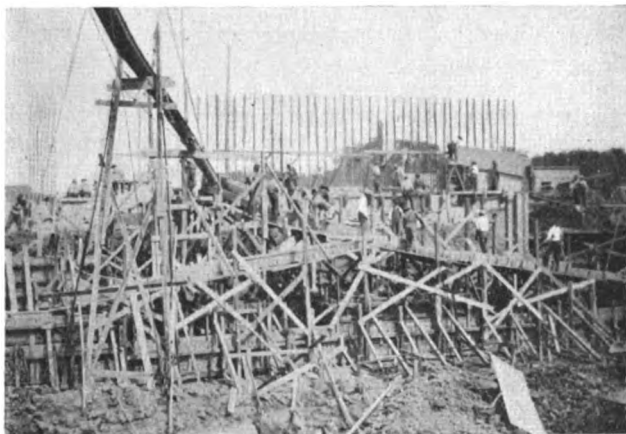


Fig. 154. PLACING CONCRETE IN BASE OF BUILDING.



Fig. 155. PLACING CONCRETE IN BASE OF BUILDING.

PART I.—I. Introduction, Steam shovels, Jan. 13; II. Steam shovels, Trench diggers, Jan. 20; III. Grab buckets, scrapers, Jan. 27; IV. Drag-line excavators, Feb. 3; V. Derricks and cranes, radial loader, paving-breakers, Feb. 17; VI. Surplus Soil Transport (Hand Labour), Feb. 24; VII. Surplus Soil Transport (Horse-drawn wagons, Steam-driven wagons), Mar. 3; VIII. Surplus Soil Transport (Steam-driven wagons), Mar. 10; IX. Surplus Soil Transport (Steam-driven wagons, Petrol wagons, Narrow-gauge track with wagons), Mar. 17; X. Surplus Soil Transport (Narrow-gauge track with wagons, Trucks on Standard-gauge track, Electrically-driven trucks and vehicles), Mar. 24.

PART II.—XI. Foundation Work (Ordinary soils, Soft soils), April 7; XII. Foundation Work (Soft soils), April 17; XIII. Foundation Work (Soft soils), April 21; XIV. Foundation Work (Soft soils), April 28; XV. Foundation Work (Soft soils), sheet piling, May 5; XVI. Foundation Work (Soft soils), steel-sheet piling, May 12; XVII. Foundation Work (soft soils), steel-sheet piling, pumping, May 19; XVIII. Foundation Work (Soft soils), pumping, May 26; XIX. Foundation Work (soft soils), foundation piles, June 2; XX. Foundation Work (soft soils), foundation piles (cont.), June 9; XXI. Foundation Work (soft soils), foundation piles (cont.), June 16; XXII. Foundation Work (soft soils), Waterproofing, June 23; XXIII. Foundation Work (soft soils), Waterproofing (cont.), June 30; XXIV. Waterproofing (cont.), July 7; XXV. Water Supply, July 14; XXVI. Concreting, July 28; XXVII. Concreting (cont.), August 4.

Sites for Houses.

By Hon. Lady Whitehead.

The building trade, we are told, is really beginning to recover a little, and as we whirl through the villages in our motor-car or char-à-banc, or amble along behind our fat pony in a governess-cart, we cannot help being aware of a great many new red-brick erections—some standing lonely by themselves, others joined together in pairs, some arranged comfortably with a little space between them—but nearly all alike in being placed in parched-up fields, with no tree near, and the embryo garden plots looking very woeful, staked out with wooden pegs, and surrounded by sketchy palings.

Yet we hear that these bleak-looking buildings have each already found an occupier, and no doubt, if we pass the same way a year hence, there will be neat muslin blinds in the windows, a home-made seat on the shady side of the house, and various small trees planted here and there, according to the taste of the owner, not to speak of a wealth of easily-grown annuals, with a precious rose-tree or two. Still, the effect produced does not suggest comfort or privacy, and is more suggestive of bringing the suburbs into the country than the making of a real cottage home.

And yet all the time there are scores of delightful sites, with boundary hedges and trees ready made, and often an old apple—or pear—trunk still remaining, wherewith to start a kitchen garden. These places are on the fringe of the most glorious national park, made up of dense woods and wild moorlands, and at the same time they are situated on the very borders of good metalled roads, and none of them are very far from the now ubiquitous motor-omnibus. The company's water is within easy reach, and the electric light cables are not far off. Railway stations are within a bicycle ride, and so is that most wonderful of all playgrounds, the sea-shore.

Our history book tells us that in olden days, before this poor old world was in such a state of combined hurry and chaos, there lived a king who felt that there were not empty spaces sufficient in which he could enjoy his favourite pastime of hunting. In these latter days, when we take credit to ourselves for upsetting and calling in question all the old beliefs, we tell each other that the land thus laid waste was valueless anyhow. That question is now unimportant. We only ask it to furnish gardens and orchards for the homes which might spring up about it.

Briefly, all this vast stretch of country was once intersected by pack-horse tracks, and by degrees, after the villages had been removed, squatters came and built their little homes at favourable spots by the wayside. There was usually only one—or at most, two—houses together. Those of us who remember a still famous book of our childhood's days will realise how the little homestead gradually grew. First, a little strip of garden, then a sty for the pig, after that an embryonic stable for the pony, and the whole was enclosed by a bank and trees to prevent the deer and wild forest ponies from breaking in and spoiling the patch of potatoes and vegetables, or the goats from nibbling the bark of the young apple and pear trees. Gradually the pack-horse tracks became passable roads, and then, one by one, the little houses disappeared. Perhaps they were too lonely for those days of slow communications, when no district nurse alleviated the terrors of sickness, skimming from one house to another on her handy bicycle, and the doctor had to make the best of his way on a sure-footed pony down the muddy track. Now, all that remains are curiously shaped little meadows of a quarter of an acre or more, quite surrounded by first-rate banks and hedges refreshingly shady and cool on a hot summer's day.

Why do not the seekers for a site for their houses take a look at some of these places? They lie close to the road, and there would be no trouble about the "approach," just a gap would have to be made in the bank, and a neat wicket-gate. Then a flagged path could be laid down, if it were desired not to have the porch opening right on to the road. There would be ample room for the much-sought-after six or even eight bedroomed little house, with its neat kitchen and attractive little servants' sitting room

and store room on the ground floor. Four little reception rooms would complete the bijou dwelling, and the surroundings would lend it dignity and peace.

The architect would not forget a verandah upstairs for the nursery, and he would probably so contrive it that there should be a *loggia* underneath, opening out of the dining-room, where meals could be taken in hot weather. Creepers would soon climb up the house and do away with any aggressive air of newness, and we must remember that this is a wonderful country for roses.

There would be plenty of room, also, for a lean-to garage at the side of the house, and this would be contrived so that it would be possible to reach it direct without going outside. The advantage of this to the owner-driver in wet weather is obvious.

The thick existing hedgerow would protect the little domain from the plague of dust and the sound of passing motor-horns, but as most of these tiny estates are not actually on main roads—though they are quite close to them—that nuisance would not really exist. There is room, too, for so much originality in planning the elevations. The shape of the ground is hardly ever the same in any two of the little lots—some are almost square, many more are long and narrow, while some are oblong—but they are all flat, so there would be no need to remove any soil.

Think how independent and self-contained a little household might be inside its own hedges and banks. The tradesmen would get their orders by telephone, and it would be no distance for them to deliver. The maids would be happy, because the nearest town was within an easy bicycle ride for their days out. Institutes are being rapidly developed in all the little hamlets, and excellent, well-conducted dances and other entertainments brighten the lives of the inhabitants. There would be no feeling of being cooped up, for the glorious forest close by is free to all, and you can wander for miles in what would practically be your private park. There would be room for a tennis-court also, but if the occupier did not care for the trouble of keeping it in order, he and his family could easily become members of the club which is not very far away; and golf, of course, is one of the features of the neighbourhood.

It would surely be a "paying proposition," as well as a labour of love, for any architect to design a series of such houses, for there is scope for individuality and ingenuity in the planning of them, and they would be sure of a fitting setting.

Only one other point must be considered, and that a very important one. Who does the land belong to? In most cases to a small owner, who grazes his pony on it, or takes a small crop of hay off it.

In many cases the title-deeds are lost in the mists of antiquity, but the local estate agents would no doubt be equal to the task of arranging the matter, and would see to it that the price of these little lost corners should not assume suddenly a disproportionate value.

In accordance with the terms of the will of the late Sir Archibald Dawney, the Royal Institute of British Architects have awarded, for the first time, two scholarships, each of £50 per annum for two years, to Mr. E. U. Channon, Architectural Association, and Mr. D. J. A. Ross, Robert Gordon's Technical College, Aberdeen; and one scholarship of £25 per annum for two years to Mr. C. S. White, Architectural Association. The scholarships are intended to foster the advanced study of construction and the improvement generally of constructional methods and materials and their influence on design.

At the last meeting of the Durham County Council the Education Committee recommended that, the Board of Education restrictions having necessitated the curtailment of building operations, the staff of the architectural department should be reduced by 15 members, and that the expenditure on salaries in that department be reduced by £4,857 10s. per annum. The report was adopted. Another economy effected was the winding up of the works department established by the last Council for the painting and renovation of school buildings. The Committee recommended that the plant and tools be sold, and the engagements of the managing foreman painter and 35 operatives terminated. A member objected to the proposal, declaring that when the painting work was performed by private enterprise there was a "ring" against the Council and the "spoil" was shared.

Studies of the English Sculptors from Pierce to Chantrey.*

XVII. Some Minor Sculptors.

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JOHN VAN OST THE YOUNGER. BUST OF DR. DELANY, TRINITY COLLEGE, DUBLIN.

III.—JOHN VAN OST (17—1787).

The younger sculptor of that name, unlike his father, who was commonly known as John Nost, appears to have used the full form of his name, and is far the more salient artist of the two. The bulk of his work was executed in Ireland, where his name was probably well known in consequence of his father's having cast Gibbons's famous statue of William III. on College Green, but as a young man he was a pupil of Scheemaker, as we learn from an interesting passage in the "Autobiography and Letters of Mrs. Delany." In March, 1752, that distinguished lady wrote: "When we returned [to Ireland], as we were to pass through Dublin, and had some time to spare, we called on a famous statuary, who has been here about two years—Vanhost. He served his time with Scheemaker, and seems an ingenious man, and a great artist in his way; he takes as strong a likeness as ever I saw taken in marble—his price is forty guineas for the model and bust. If our lawsuit ends well, the Dean [her husband], I hope, will sit to him. He bought four busts, and bespoke two more for his library—Seneca, Aristotle, Galen and Horace; they are done in plaster of Paris, and varnished so well that they look like polished marble at a proper distance." Dean Delany did sit to him eventually, and his bust in gown and bands, here for the first time reproduced—one

of the very best of its century—is in the Library at Trinity College, Dublin, which boasts as its chief ornament the Swift of Roubiliac. It is extremely probable that four other busts there, those of Aristotle, Socrates, Boyle and Demosthenes, are from the chisel of Van Ost; the signatures are invisible as the busts are now placed, but, as we have seen, Delany bought a cast of his Aristotle, and it is a natural inference that the original is to be seen in the library where Delany's own bust is placed. And if the Aristotle is Van Ost's, the others may well be his work. Be this as it may, the bust of the Dean himself is a triumph: "the genius of good humour is caught and indurated in the marble, there to last and to look like life for all time";† the date on the pedestal, "Ætatis suae LXXXIV," is probably a stonemason's error for LXXIV., as the Dean died in his eighty-third year.

That venomous pamphleteer in verse, "Antony Pasquin," also states that Van Ost went to Dublin in 1750, thereby confirming Mrs. Delany's statement, and that he became popular is shown by the commissions for two busts of Swift, who, though dead, was still the idol of Dublin, that now in the Dublin National Portrait Gallery and that "in the possession of Mr. Pierce Finucane of Pembroke Road, Dublin" (Swift's Works, Bohn's ed., Vol. X. (190), p. 49). His is also the statue of George II. on St. Stephen's Green, which was erected on January 2, 1758 ("Gentleman's Magazine," 1758, p. 41), and several works in Dublin Castle, including the statues of Thomas Prior and Samuel Madden in marble, and the lead figures of Justice, Peace and Mars in the Upper Yard. The New Gardens, then the Vauxhall of Dublin, also contained a good deal of statuary by him both in marble and lead, of which that in the Rotunda still exists. A statue of Mr. Lawton, ex-Mayor of Cork, is also mentioned, but the bronze statue of George III. "in a Roman military habit" in the City Hall, Dublin, is of far greater interest. It cost its donor, Lord Northumberland, Viceroy from 1763-5, 2,000 guineas, and its recent history is too characteristic to omit. "In 1906 a majority of the Dublin Corporation voted for its removal, the grounds alleged being, first, that it was a statue of an English king; secondly, that he was represented as a 'Roman Highlander'; and, thirdly, that it was the work of a Dutchman." It was, however, quite recently in place. What will become of it under the new régime is a matter of some interest.

In 1765 Van Ost visited England, when, as Sir Lawrence Weaver notes from a contemporary newspaper, "Mr. Van Nost, an eminent statuary from Dublin, is lately come over to take a model of His Majesty for a lead statue which is to be erected in the Exchange about preparing in that Metropolis." It must have been upon this visit that he occupied No. 104 St. Martin's Lane, formerly the house of Sir James Thornhill, and of Francis Hayman; and it must have been upon this visit that he made a popular bust of Garrick which, as J. T. Smith tells us, was to be seen "in every barber's shop-window as a block for wigs." We commend the hint to barbers of to-day! Nollekens, who mentioned the fact, accused Garrick of unjustly favouring foreigners, conveniently forgetting that while his own father was Flemish and his mother French, Van Ost's mother, as we have seen, was an Englishwoman and his father English enough in feeling to alter his Flemish name.

Little more is to be said save that Van Ost executed a marble bust of William III., now lost, of which he advertised that casts were to be had, that he came to England a second time in 1780, and that he died in Mecklenburgh Street, Dublin, in 1787.

* For preceding articles in this series see:—Introductory Article, July 1; Nicholas Stone (1587-1647), July 8; Edward Pierce (ob. 1698), Sept. 2; Caius Gabriel Cibber (1630-1700), Sept. 16; Grinling Gibbons (1648-1721), Sept. 30; John Bushnell (d. 1701), Oct. 7; Francis Bird (1667-1731), Oct. 21; Peter Scheemaker (1690-1771?), Dec. 9 and Feb. 10; John Michael Rysbrack (1693-1770), Mar. 3 and April 7; Louis François Roubiliac (1695-1762), April 21, June 16 and June 23; Joseph Wilton (1722-1803), June 30; Some Minor Sculptors, July 21.

† "Dublin University Magazine," quoted in W. A. Strickland's "Descriptive Catalogue of the Pictures, &c., in Trinity College," Dublin, 1916.

IV.—LAURENT DELVAUX (1695-1778).

The necessity for keeping the work of the Van Osts, father and son, together has led us out of chronological order, and we must now return to an obscurer figure, Laurent Delvaux, whose stay in England was comparatively brief. Born at Ghent in 1695, he was the pupil of a local sculptor named Helderberg, and is said to have come to England in his twenty-second year, and, like his fellow-countryman Scheemaker, to have found employment successively with Plumier, another Fleming, who died in 1721, and Francis Bird. He can have served but little time with either, as in 1722 he was collaborating with Scheemaker on the monument of Sheffield Duke of Buckingham (ob. 1721) in Westminster Abbey, a singularly magnificent commission for two young sculptors. This work, in which the splendid figure of Time carrying medallion portraits of the Buckingham children is by Delvaux, the lower portion by Scheemaker, was erected in 1722, a record surely for speed in the completion of so large a work, and in 1725 a second monument by the friends was erected, that to Lewis Earl of Rockingham and Katharine, his wife, in the church at Rockingham, Northamptonshire, in which, however, their shares cannot now be distinguished. Like those of the last-named, the figures are in classical dress.

In 1728 Delvaux, Scheemaker and the painter Peter Angelis set off for Rome, where Delvaux found work, notably for the Portuguese Minister, and evidently acquired a social importance of which we shall hear later. He was meanwhile collaborating with Scheemaker on the monument of Dr. Hugo Chamberlen (ob. 1728) which, as we know from Vertue, was erected in 1731, and was therefore presumably begun in Scheemaker's workshop before they left and finished by that sculptor on his return from Italy two or three years before his friend. This was a commission from Edmund, last Duke of Sheffield, son of the poet Duke whose monument he had made in 1722, and was described in *THE ARCHITECT* for December 9, 1921.

Delvaux only stayed in England a couple of months, during which his portrait was painted by Isaac Whood. He then set out for Brussels with a letter from the Pope

to the Papal Nuncio there, and evidently made himself *persona grata*, since the Nuncio recommended him for the post of chief sculptor to the Emperor Charles VI. and the Archduchess Marie Elizabeth. Thereupon he settled at Nivelles, and evidently kept up his connection with England, since in 1744 a young Englishman entered his studio who was afterwards known to fame as Joseph Wilton, R.A. In 1750 Delvaux became chief sculptor to the Duke of Lorraine, but with his work in Flanders, with the posthumous honours paid him by his native town, and with the important collection of his works which was sold at Brussels in 1868 we have nothing to do in an account of English sculpture.

He left other works in England, however, which claim notice here: a bronze Venus at Holkham; a marble Hercules done for Lord Castlemaine at Wanstead; an interesting group of Vertumnus and Pomona at Canons, and afterwards at Stowe, which the writer thought (1921) decidedly inferior to Scheemaker's rival group of Venus and Adonis; and according to most authorities the famous lead lion after Michael Angelo, once on the street front of Northumberland House, and now on the gateway of Syon House, of which the park-keepers at Kew say, as the jesters of the Strand said before them, that he wags his tail as the clock strikes twelve. The writer has seen a group of Cockneys listening anxiously by the Kew towing path, and heard the "There, did you see?" from their upturned and believing throats. Thus Time, whom Delvaux so nobly represented in Westminster Abbey, still keeps this one work of a forgotten sculptor alive and interesting, while his more ambitious efforts are ignored.

Note.—There is a perplexing note of Vertue's which seems to show that Delvaux's father was also a sculptor. "—Laurens, Statuary of Mechlin. —Deivot—Statuary of Brussels. Both these Artists were in England and assisted Mr. Gibbons in Statuary works in K. Charles 2d and K. James 2d time; they left England in the troubles of the Revolution and returned to their own country, where Laurence became wealthy, did many Curious works, not only in the Statuary way, but also carving Ornaments of Wood.

"Deivot liv'd to a good age till about 1715 at Mechlin. "Mr. Claüsen, Statuary to Risbrack."

If this Deivot is Laurent Delvaux's father—and Vertue's phonetic spelling will be familiar to readers of these studies—there was a family connection with England which accounts for the son's success in obtaining important commissions early in his career—he was barely twenty-six at the time of the Buckingham monument. The Laurens here mentioned assisted this Deivot or Delvaux to cast Gibbons's James II. at the Admiralty; other full-sized works by him are not specified, but a copy of the famous Ludovisi group—now usually called Orestes and Electra, but then known as L. Papirius and his mother—evidently executed in Rome, was sold at the Nollekens sale of 1823, and a number of small models of classical subjects at Scheemaker's second sale, March 10-11, 1756. It is thus obvious that Delvaux was, like his friend, notable for his industry, and that his work was good enough to be treasured by that excellent critic and keen collector, Joseph Nollekens.

Fifty Years Ago.

AUGUST 10, 1872.

THE LAND ON THE SOUTHERN EMBANKMENT.

The Lambeth Vestry are endeavouring to prevail upon the Board of Works not to let two pieces of land on the Albert Embankment for building purposes, but to keep them open and plant them ornamentally in a similar manner to those already planted on the Victoria Embankment. In a memorial on the subject, presented by the Vestry last week to the Board of Works, the Vestry drew the attention of the Board to the garden which adorns the Victoria Embankment as a promenade, and state much satisfaction would be felt by the poor inhabitants of Lambeth, who live in most inferior dwellings near to the Albert Embankment, were similar privileges afforded to them by the laying out of gardens, and the planting of vacant spaces. The Board received the memorial favourably, and the probability is that the suggested works will be carried out.



LAURENT DELVAUX. FIGURE OF TIME ON THE MONUMENT TO SHEFFIELD DUKE OF BUCKINGHAM, IN WESTMINSTER ABBEY.

Royal Archæological Institute. Summer Meeting—III.

The third day of the Summer Meeting of the Royal Archæological Institute was favoured with excellent weather. A start was made from Ripon in the motor coaches at 9.30 a.m. for

SNAPE CASTLE.

This castle is best viewed from the north side, despite the fact that only the south front is other than in ruins. But that façade is rather a long, flat and dull one, without much of the picturesque left after its many adaptations. This latter fact has also robbed the interior of most of its interest as an example of fifteenth-century work. From the north the pile becomes a picturesque castellated mansion on the courtyard plan dating from 1450, when the military proprieties had become entirely subordinated to the domestic. It was erected by John Nevill, first Lord Latimer of Snape and son of the first Earl of Westmorland. Leland, writing nearly a century later, says "Snape a goodly castel in a valley longing to the Lorde Latimer, and ii or iii parkes welle woodid abowt hit. It is his chefe House and stondith a ii mile from Great Tanfield." A few years later the fourth and last Lord commenced a reconstruction. According to Mr. W. M. T'Anson, who acted as guide and from whose minute knowledge this account is taken, he appears to have recast the first floor of the east or principal range, converting the suite of private apartments into one long and stately gallery or Great Chamber 72 ft. long by 30 ft. wide, and to have erected the north-east and south-east towers to contain the new private apartments. He also remodelled part of the southern range and internally brought the house thoroughly up to date. His son-in-law and successor, Thomas Cecil, second Lord Burghley and first Earl of Exeter, the son of the famous minister of Elizabeth, completed the residence between 1550 and 1583 and turned it into a stately Elizabethan country house, making the southern range the principal portion. After his death it was usually tenanted by agents of the estate during the next eighty years. From 1725 the place was allowed to fall into disrepair and was never again inhabited by the Cecils. Internally not much of interest is to be seen, as the remaining southern range was remodelled and partitioned up last century. There is a panelled plaster ceiling of the late sixteenth century and some seventeenth-century oak panelling and staircase. From an antiquarian point of view the chapel in the eastern end of this range was ruined by the Cecils and very little original work now survives. The fifteenth-century roof was destroyed when Antonio Verrio, who was engaged at Burghley House for twelve years, was working here about 1690, and it was replaced by the present ceiling painted with scenes depicting "The Wonder and War in Heaven" as described in Revelation.

A journey of twenty minutes brought the party to

BEDALE CHURCH.

Externally the most conspicuous feature of this church, which is dedicated to St. Gregory, is the handsome tower, which was an addition of c. 1330. It is very massive and lofty, being 98 ft. from the ground level to the top of the angle pinnacles. Mr. McCall claimed that it is one of the best, if not the best, among parish church towers in England. The tower and porch are, he said, one build, and the same base moulding (which is a very fine one) runs round both. The belfry stage is a later addition and appears to have been built at the same time as the clerestory of the nave—say about 1400. There is no indication that the tower was originally intended to contain bells at all until the upper stage was added. On the other hand, the structure is of unusual strength and is provided with living apartments, a fireplace and all the accommodation which might be required in a state of siege. Access to its upper stories could be cut off by a portcullis suspended over the internal entrance doorway of the boldly projecting staircase turret. It was, indeed (as Sir Walter Scott said about Durham Cathedral), "Half church of God, Half castle 'gainst the

Scots." The Scots, after the victory of Bannockburn in 1314, overran much of this part of Yorkshire and committed great depredations. Many places in the locality had to be excused payment of certain taxes in 1318 by reason of the damage done to their goods and substance by the Scots. The latter's power was broken at Neville's Cross in 1346. Other semi-fortified church towers in this district are those of Thornton-Watlass, Melsonby and Spennithorne—all in the pathway of the Scots' raids.

The interior affords an interesting illustration of a pre-Domesday church, extended and added to on many different occasions from the twelfth to the sixteenth century. The first addition to the early church was a north aisle, the arcade of which is considered by Mr. McCall to have been inspired by Jervaulx Abbey. In the hollows of the arch mouldings and at the angles of one of the piers are what have been called nutmegs. The detail is confined to the north of England and to building work dated about 1190. The indented ornament of the hood mould is the final trace of the influence of the chevron—the predominating and most frequent ornamental detail of the Norman period. In its last days it was confined to the hood moulds of arches and to string courses, and it is common all over the bishopric of Durham in churches built during the long episcopate of Hugh Pudsay, 1153–1197.

Each of the three isolated piers with their bases and caps are different. Mr. McCall saw something of Cistercian influence about the capitals. That Order's renunciation of ornament was not so strictly interpreted in England as in Burgundy, for instance; and their abbeys (especially in Yorkshire) inspired the work done in neighbouring parish churches to a very marked degree. About a hundred years later a broad south aisle with a chapel dedicated to the Blessed Virgin Mary was added by Bedale's greatest lord, Brian Fitz-Alan, the trusted servant of Edward I. It has a five-light east window, which is unusual both as to its tracery forms and its size in relation to the area of wall in which it stands. But Mr. McCall controverted the tradition that it was not originally built in its present position c. 1290. When the chancel was extended eastward some thirty years later, advantage was taken of an abrupt fall in the ground to construct a stone-vaulted crypt of three bays. About 1340 the north aisle was widened and lengthened by Brian de Thornhill, who was rector of the church for forty years. Through all its successive additions the church has always preserved its original form of a parallelogram. The extension of a church by the addition of transepts, converting the fabric into the cross plan, is less common in the north of England, said Mr. McCall, than in the south. Some of the most stupendous church structures, such as Cirencester; St. Michael's, Coventry; Manchester, and Boston never had transepts. This church is celebrated for its five stone effigies. In the north aisle chapel under a recessed arch lies the figure of a priest believed to represent Brian de Thornhill. Although Brian Fitz-Alan died in 1306, his bareheaded effigy—"amongst the finest specimens of monumental effigies in the country"—was assigned by Mr. McCall to about 1330, one reason being the presence of the ball flower ornament in the canopy, as that detail was not invented before 1325 at earliest. The lady of the neighbouring tomb is assumed to be Brian's first wife, who died in youth about 1290. The identity of the two remaining knights has not been settled. One, which may date about 1368, offers an interesting illustration of the transition from chain to plate armour. The other shows its figure in complete plate.

After lunch at The Black Swan the journey was resumed to

PATRICK BROMPTON CHURCH.

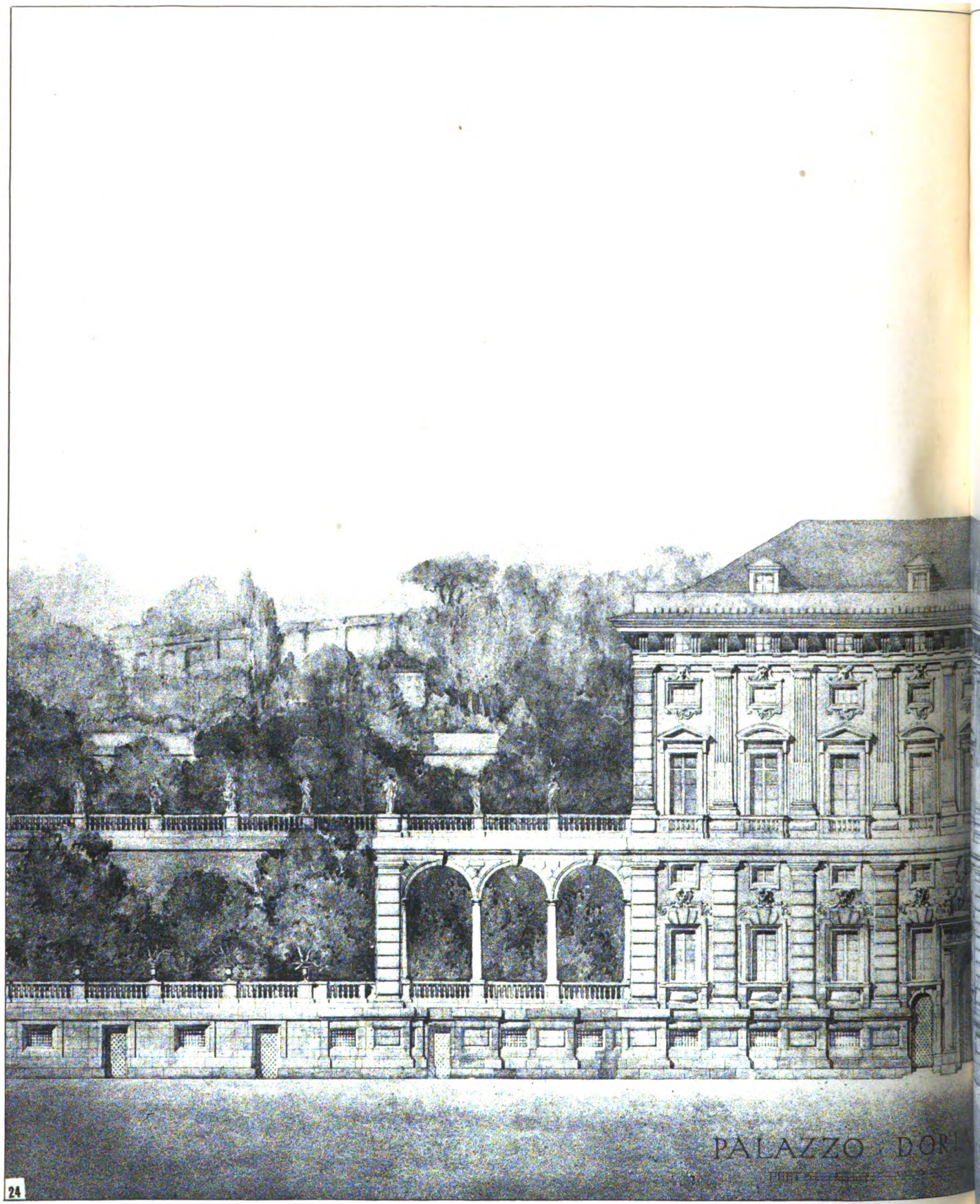
Of the church here which was bestowed on the Abbey of St. Mary, York, shortly after its foundation in 1089, nothing visible remains. But as the present nave is only 15 feet wide and has walls about 2 feet 7 inches thick, it probably occupies the site of the pre-Norman church. Towards the close of the twelfth century considerable extension was

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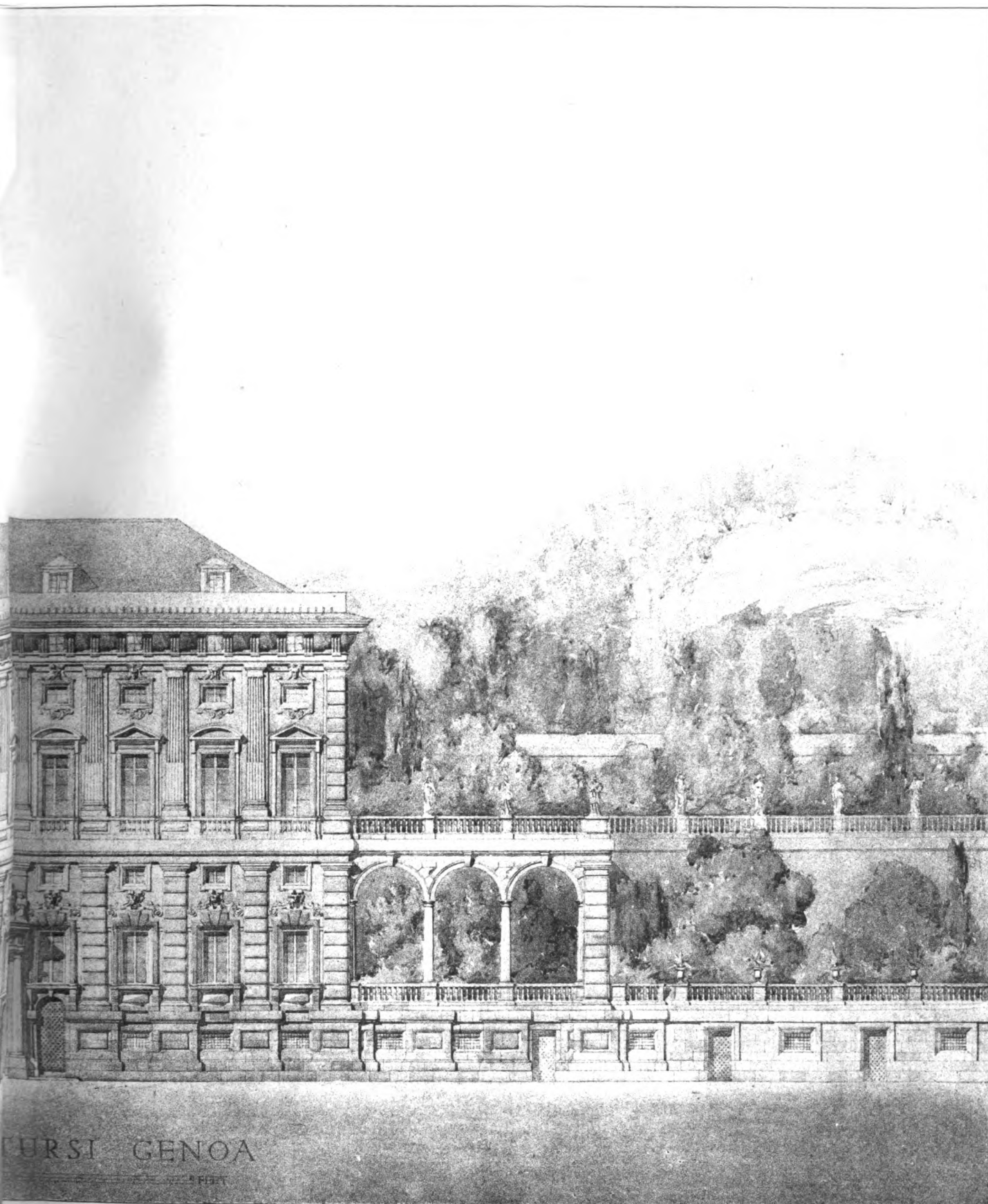
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PALAZZO DORIA

FIFTH EDITION

AUGUST 11th, 1922.



TURSI GENOA

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TURSI, GENOA.

EPWORTH. ARCHITECT.



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EXTERIOR VIEW.

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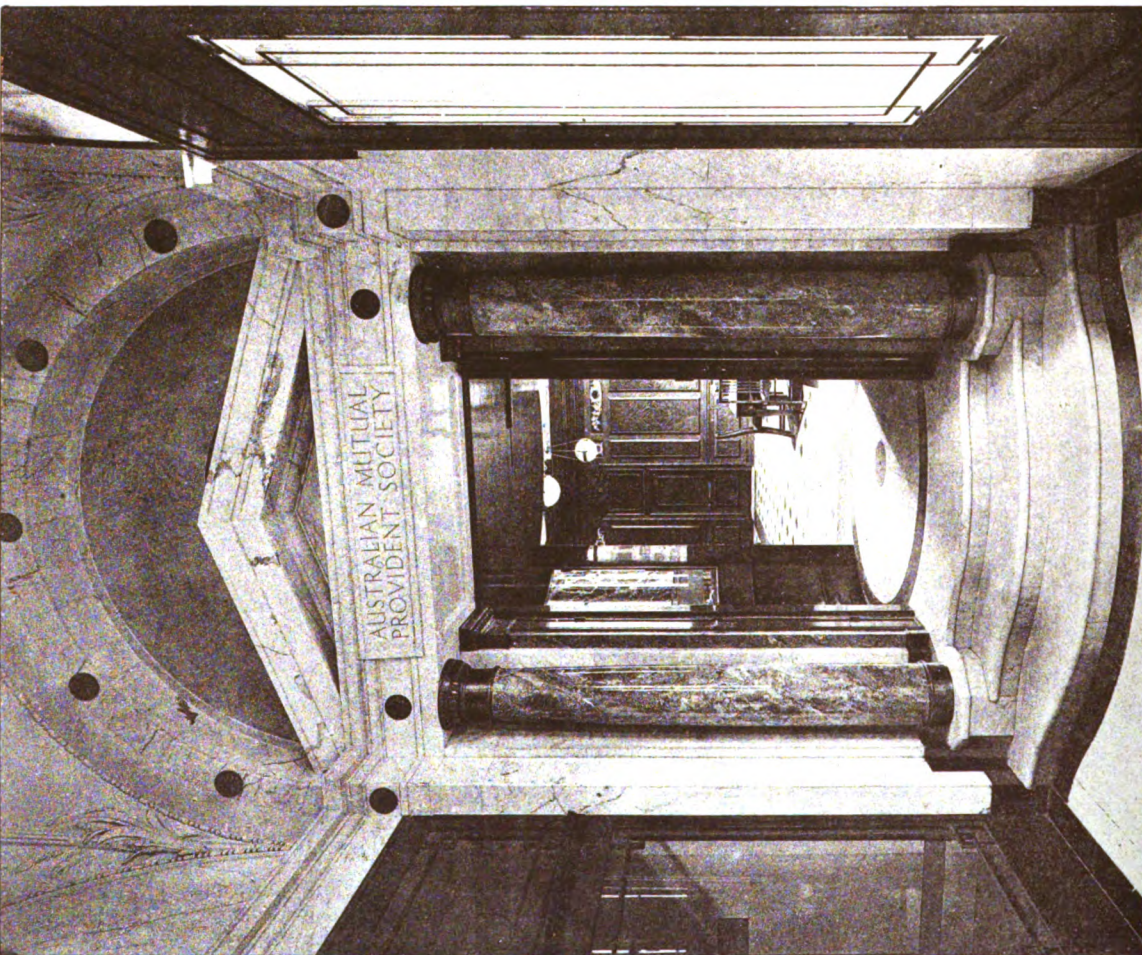
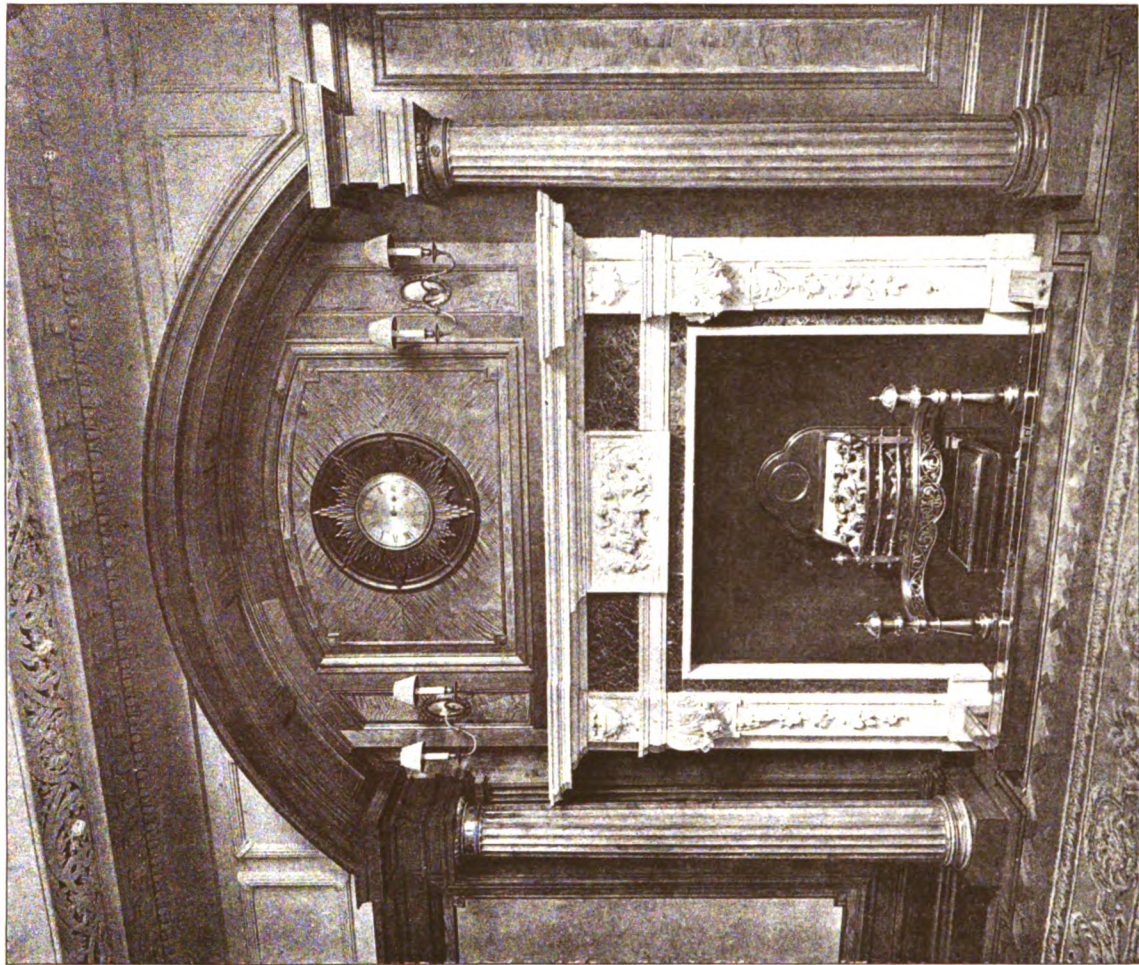


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VESTIBULE LOOKING INTO GENERAL OFFICE.

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OVERMANTEL AND FIREPLACE IN BOARD ROOM.



BOARD ROOM.



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achieved, and much very ornate detail introduced. Mr. McCall said he believed it was inspired by the Benedictine St. Mary's Abbey, and especially by the work in the vestibule to their chapter house (now in ruins), which was built about 1170. He thought it probable that the same stonemasons having finished their work at York were employed on this and other churches belonging to St. Mary's. By about 1300 the church probably consisted of its original nave and small chancel, a north aisle with a very ornate arcade and a transeptal chapel on the south. Some thirty years later the chancel was both widened and lengthened and the south chapel was extended so as to form an aisle. In the magnificent chancel Mr. McCall saw the influence of the wealthy York monastery. In its dimensions, general arrangement, continuous string course, canopied niches on either side of the altar, and in other respects it is one of a type of chancel common in the county. His suggestion is that the masons who worked under Archbishop Romanus on the nave of York Minster developed a school whose last great work before 1291 was the nave of St. Mary's Abbey. These men and their apprentices would carry the traditions into other parts of Yorkshire and the neighbouring counties influenced by York. The chancel arch, somewhat acutely pointed, is considered to be the finest in the county. Its section may be described as a series of pear-shaped members with deep hollows between them, but the soffit order is a filleted roll. The mouldings of the canopied tomb recess are in general character similar to those of the chancel arch. Mr. McCall threw out the suggestion that this and similar empty recesses elsewhere were never intended for effigies, but for the reception of the corpse during the funeral rites. Other features pointed out for notice were the great east window with its reticulated tracery; the heads terminating the hood moulds (humans within and devils outside the church); the sedilia and piscina; the entrance to the rood loft with its newel stair of eleven steps; the old glass incorporated in the vestry window, and the south porch.

Effigies of a knight and lady, c. 1300, repose beneath an arched canopy in the north aisle; and others in alabaster, also of a knight and lady, in the south chapel, are of about the year 1422.

HORNBY CHURCH.

The exterior at least of this church was so thoroughly restored by Mr. Pearson about forty years ago that to the casual glance it might appear to be only fifty years old instead of eight centuries. The tower is the only part belonging to the eleventh century and has buttresses of 7½ inches projection to its 3 feet thick walls. Professor Baldwin Brown in his book "The Arts in Early England," quotes this tower as a proof that the double belfry opening divided by a shaft continued into post-Conquest times. The semicircular north arcade displays much pleasing variety of detail and ornament. Mr. McCall mentioned that these arches were so overlaid with successive coats of whitewash it was impossible to tell at the restoration of 1877 whether there was any carving upon them. This excellent local authority also took pains in this church to correct the popular mistake of supposing that all semicircular arches are necessarily older than those which are pointed. Broadly it is true that the pointed arch did ultimately supersede the other form, but they overlapped to a considerable extent, and the two went on side by side for at least fifty years in the second half of the twelfth century. The details of this semicircular arcade at Hornby are actually more advanced than those of the pointed northern arches at Patrick Brompton. The south aisle was added in 1410. The Duke of Leeds has the original contract for the erection of this aisle entered into between John Conyers of Hornby and Richard the mason on January 28, 1409-10. The aisle was to be full as broad as the already existing north aisle, with two whole pillars and two half pillars, a convenient window of three lights at the east end and two two-light windows in the south wall. Richard the mason did a good bit of rebuilding work hereabouts in the years following 1400. The south chapel dates from about 1490. Some exceptionally well-preserved fifteenth-century stained glass is in the west window of this aisle.

(To be continued.)

Correspondence.

Wages Agreement in Electrical Trades.

To the Editor of THE ARCHITECT.

SIR,—I have the pleasure to inform you that at a Conference held in York on the 27th ult. between the Executive of the National Federated Electrical Association and the Electrical Trades Union, an agreement was arrived at by which each side recommends to its constituent body a reduction of wages of 5 per cent. to take effect on the second pay day in October, and a further 5 per cent. to come into effect on the second pay day in December. This agreement was later confirmed by a meeting of the National Joint Industrial Council.

Agreement was only effected after protracted negotiation, great difficulty being experienced on both sides of the table in bringing the representatives of various districts into line. A reduction in wages was necessitated partly by the slump in trade, general demand for lower prices, and partly by the difficulties experienced in districts where the E.T.U. have already put into force lower rates of wages in the Building and Engineering industries.

In districts where this latter form of competition is not being withheld, employers were anxious to minimise the reduction and openly expressed disagreement with a policy of forcing wages down.

Whereas in districts where there exists great disparity between the rates paid in the Contracting and the Engineering industries employers demanded a reduction which would bring the wages paid to E.T.U. members by Contractors down to those paid to E.T.U. members in the Engineers' employ, which would be a reduction of a great deal more than the amount finally agreed.

During the course of the negotiations a proposal was put forward from the employers' side which was well worthy of further consideration. Broadly, the proposal was that a reduction of wages should only come into force in districts where there already existed a disparity between the rates paid to Electrical Trades Union members by different industries, and that in such places the rate paid by Contractors should be automatically reduced to meet half-way the minimum rate paid in the district by Engineers or Builders.

This proposal was turned down by the employees' side of the table upon the ground that it was of too novel a character to be considered without notice. At a future conference this scheme would be more carefully examined; in the present instance it certainly offered a less total loss to the men than that finally accepted, and at the same time it would have better met the difficulties of Contractors in those districts where they are most hardly hit by the Engineering competition.

Other matters decided at this conference were the down-grading of Southampton and Belfast to Grade "C" scale of wages, no alteration to take place in the grading of Bournemouth and Cambridge County.

The Chairman (Mr. Marryat) congratulated the conference upon the obvious endeavour made upon each side of the table to see and understand the difficulties of the other, and the good feeling which had enabled those difficulties to be overcome.

This is another instance of the successful application of the Whitley principle.—Yours, &c., H. MARRYAT, President.

The Electrical Contractors Association (Incorp.),
11 Southampton Row, W.C.1.

The Bank of England, 1792-1820.

A special exhibition of the sketch models used by Sir John Soane, R.A., in the building of the Bank has been arranged by the Curator in the Students' Room on the ground floor of the Sir John Soane Museum, 13 Lincoln's Inn Fields.

Among special features of the famous interiors of the Bank, too little known to the general public, are here shown the Prince's Street Entrance Vestibule, the open Loggia to the Waiting Room Court, the Accountants' Hall (with a noble barrel vault), the Lothbury Court (on the lines of Palladio's villa designs), the Bank Stock Office and the Consols Office, both of striking originality of design.

There are, in addition, models and photographs of the Tivoli Corner and other parts of the exterior and interior of Sir John Soane's masterpiece.

The Museum is open free throughout August on Tuesdays, Wednesdays, Thursdays, and Fridays, 10.30 a.m. to 5 p.m.

Swansea Corporation has appointed Mr. James Hassall, of Sheffield, as chief assistant engineer of the main drainage scheme, at a salary of £600 per annum.

Open Spaces in the Rear of Small Houses.*

By Manning Robertson, F.R.A.S., A.R.I.B.A.

The subject of bye-laws is so intricate that, in entering upon a short analysis of its unsatisfactory side, there is a danger of floundering among the numerous details that invite amendment. I propose here to concentrate upon two vital and fundamental points where the bye-laws have failed and that have an essential bearing upon the health of the community. It is best to approach the subject, not through an examination of the bye-laws themselves, nor by pointing to this and that anomaly or omission, but by considering broadly the type of house that has resulted from the application of the bye-laws, and by examining the gaps in the governing enactments or bye-laws that rendered possible the outstanding defects in pre-war housing.

The Departmental Committee on Building Bye-laws, appointed by the President of the Local Government Board in 1914, has, in its 1918 report, given us a thorough summary of the position and of possible remedies; but in attempting to rectify numerous small defects and absurdities, which cause intermittent worry, we may overlook the fundamentals, and fail to concentrate sufficiently on the obvious fact that our bye-laws, by omitting to deal with certain essentials, have failed to secure an adequate standard of housing. The competitive speculator is a past-master in the art of discovering loopholes, and we owe it to the community to see that such gaps are filled, especially when they are being utilised on a tremendous scale.

We are not here concerned with over-meticulous requirements as to house construction, but we cannot adequately deal with the effect of bye-laws upon public health without reference to the width and construction of roads; and, above all, we must realise the disastrous results of our consistent refusal to recognise the importance of light.

In examining pre-war housing, leaving out of account the question of design (which is not without its bearing on the moral and physical welfare of the people), we find, almost universally, the following characteristic defects:—

1. The frontage is too narrow.
2. Light is obscured from the main back windows by an extension of the building at the rear.

These two faults are well known, but there is nothing to prevent them from being perpetuated in the future. Number two follows as a direct consequence of number one, as can be seen on Fig. A. It illustrates the inevitable degradation of a sound plan when it is subjected to the squeezing process with which we are too familiar. The areas of the rooms are the same for the 15-foot front as for the 21-foot front, but when the frontage is reduced the lighting of the living room is sacrificed, and the outlook becomes dreary and depressing in the extreme. On any ordinance sheet of any town in Great Britain a superabundance of such houses can be found, generally in terraces.

It is impossible to prevent the erection of these narrow-fronted houses by any stipulation as to a minimum frontage. I suggest that the problem can best be tackled in two ways simultaneously:

*Abstract of a paper read at the Bournemouth Congress of the Royal Sanitary Institute.

first, by reducing compulsory development charges to a minimum; secondly, by getting power to secure adequate lighting, and in each of these directions Parliament should be asked to extend the requisite powers. The first remedy is persuasive, the second obligatory, but both would tend towards the discontinuance of the evils under consideration.

Let us now examine the position with respect to cramped frontage, in so far as this is unintentionally encouraged by the bye-laws.

It has for many years been the custom in this country to place two or more "working-class" houses where there was only adequate room for one, or four where there was only proper space for three, and, while it cannot be said that bye-laws or other regulations were entirely responsible for the practice of overcrowding, by which term I denote excessive density, it is certain that they have, on the one hand, indirectly fostered it, and, on the other, have not directly prevented it. It may be contended that I exaggerate when I say that we have habitually overcrowded our houses in the past. In reply, I point to Fig. A, and ask whether 90 per cent. of small Victorian houses were not of the degraded shape shown on Plan 3. They are that shape because the frontage was cramped, and because it was, therefore, necessary to squint the scullery and offices outside the main building into the back extension, and the frontage was cramped because too many houses were placed along a given length of road, and this means overcrowding. We have already noted the main objections to Plan 3, and it cannot be denied that bye-laws that permitted the erection of such dwellings in hundreds of thousands have proved themselves inadequate to secure healthy and satisfactory conditions.

The limitation of the number of houses to the acre would get over the difficulty, and is a necessity in any town-planning scheme; but such a restriction could hardly come within the scope of the bye-laws, and it is first in the direction of relaxing overstringent demands in road-making that we must look to them for help.

The question of the width and construction of streets and carriageways is exceedingly complex, and has been fully considered in Chapter 4 of the Committee's report already referred to. A thorough revision of the existing system is here necessary, and to this end Parliament should be asked to extend adequate powers. The main trouble arises, not when new streets are made, but when local authorities make excessive demands on taking them over, and owing to the uncertainty on the part of the developing owner as to what he will be expected to spend at that stage. From the standpoint of public health, we should aim at the elimination of every unnecessary requirement as to width and construction of carriageways and streets generally. The saving of development charges that could be secured by a judicious and comprehensive grading of streets, to suit the traffic they would be called upon to carry, would be very great, and would help materially to extend the frontage of each house. The total width across the road between the fronts of houses

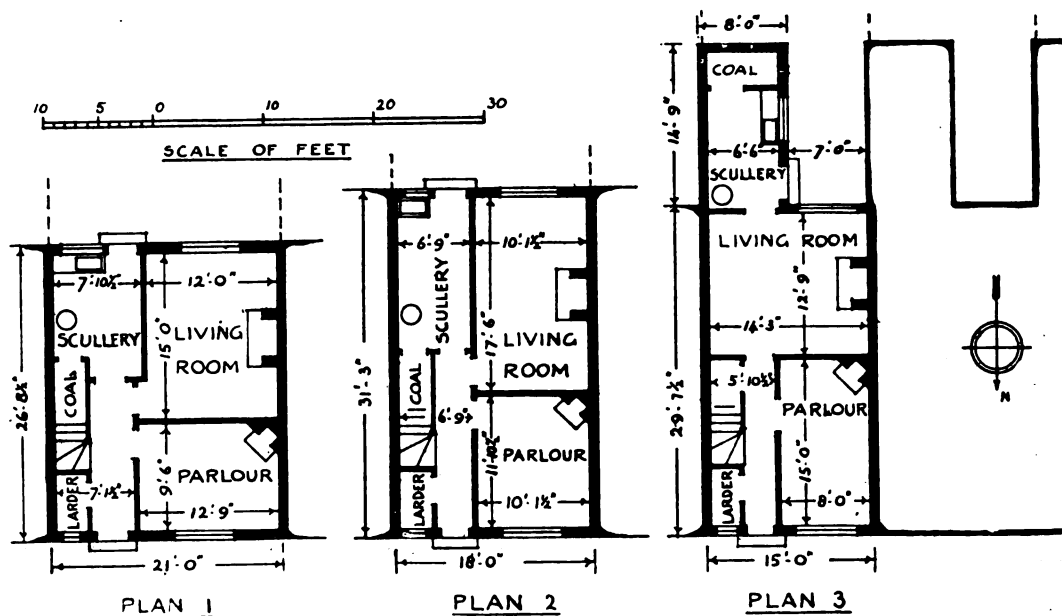
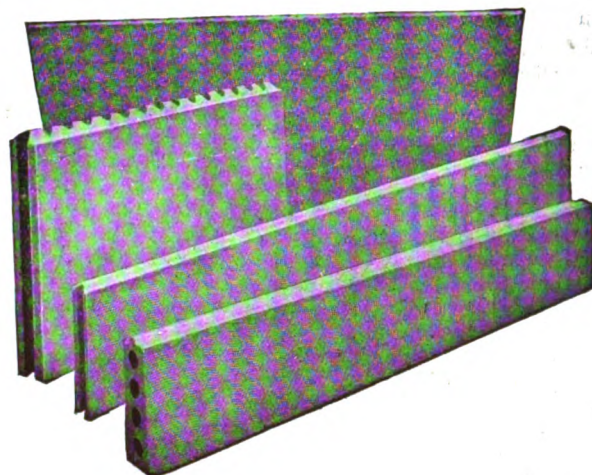
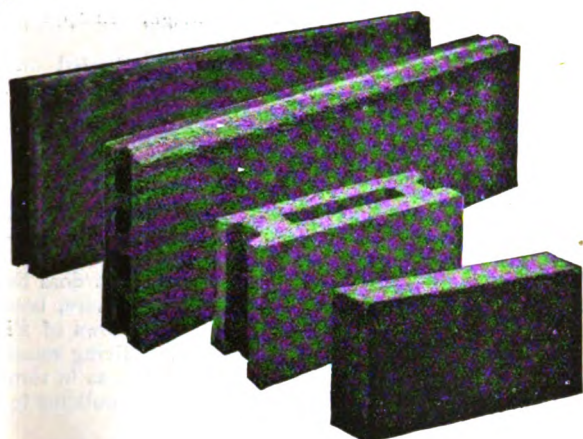


Fig. A.

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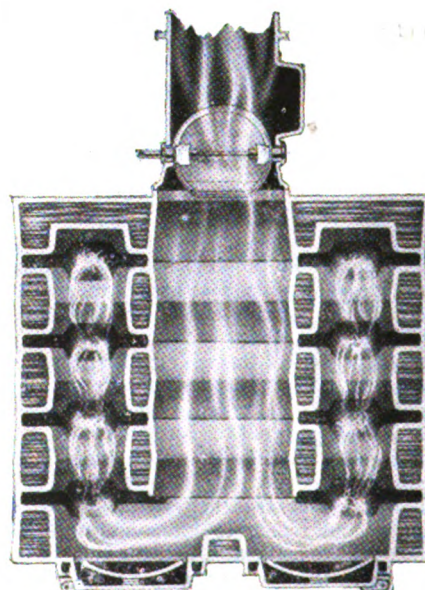
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should be increased; there should be a more thorough supervision of building lines; forecourts, and grass or gravel margins should supplement the reduced carriageways. In referring to lighter roads I speak, of course, of residential roads, cul-de-sacs, and the like; arterial roads would be sufficiently wide and solid to cope with their traffic, and would be laid out to allow room for widening, should this become desirable at a future date. The question of roads has been fully ventilated in the report. Every penny unnecessarily spent on roads is a penny less to spend on necessary frontage.

The lack of elementary town-planning principles, especially in connection with transport, has contributed to the practice of treating minor roads as potential main thoroughfares; all roads had to be made of a width and substance to permit, if necessary, of their use as main roads. The waste of resources involved in such haphazard methods is obvious, and is easily avoided by the exercise of a little forethought. The principle governing the bye-laws as to roads is that adopted by the old lady, who was polite to all girls, because, she said, one never knew which of them might marry a duke.

We now come to defect No. 2, to which I propose to offer a definite solution. First, the Public Health Act of 1875, which gives power to secure "a free circulation of air," must be amended to include light, and I suggest that the attention of the Minister of Health be drawn to the urgency of obtaining such amendment. Under the law as it stands it is doubtful whether windows can be legally demanded at all, and whether holes in the wall or dark louvres would not meet all strictly legal requirements; but as we are here considering abuses that are in being, and not those that might legally arise, I shall confine myself

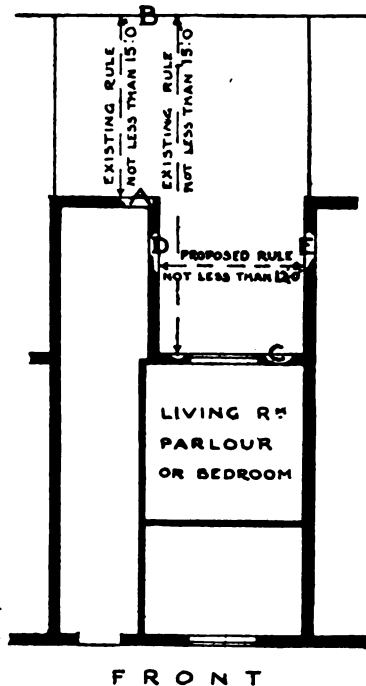


Fig. B.

to outlining two proposals, each of which presupposes that we are given powers to deal with light, and either of which should help to cure existing evils.

The first possibility would be to include a proviso in the bye-laws to the effect that no extension to the rear of any dwelling-house shall be so constructed as to interfere materially with the light entering any living room or bedroom. I am dubious about this proposal, because the word "materially" would be interpreted in different ways; some might consider that any extension to the rear was inadmissible, while others might allow a serious obstacle to light on the grounds that the obstruction was not really material, and this difference of interpretation must lead to confusion, and the rule would sometimes fail in its purpose. One would prefer a simple and definite requirement, binding upon everyone who built a dwelling-house—one that would be applicable to all houses and in all districts. The difficulties of devising a satisfactory rule of this kind are: that it must apply equally to all houses, whether detached or in terraces; it must not hamper good design nor become illogical when applied to large houses; neither must the action of A in building a house prejudice the position of B if he wishes to build a second house adjoining A; in other words, no individual's action should affect the rights of a neighbour.

My proposal, which I think meets these difficulties, is as follows:—

Referring to Fig. B. It is now stipulated that the distances A—B and C—B must each be at least 15 feet (although the distance C—B, for obvious reasons, is usually, and is here shown, a good deal more). I suggest that, in addition to the two requirements as to A—B and C—B, a third should be inserted, to the effect that, when the light to any ground-floor living room or bedroom depends upon a window in the back wall C, the distance D—E shall not be less than 12 feet. I incorporate in this rule an exemption for walls projecting less than four feet, in order to allow every possible freedom in design. In appropriate language, I propose the following:—

Where any living room or bedroom, situated on the ground floor, depends for its light upon a window in any rear wall, the width of the open space adjoining such window, measured parallel to the window, from any wall rising above the level of the sill, and projecting more than four feet from the plane of the face of the wall containing the window, to any other such wall, and to the boundary of any lands or premises adjoining the site, shall not be less in any part than twelve feet.

This rule precludes the back extension where it does harm, but legitimate use can still be made of this feature, because the ill-lighted back wall can be used for windows of minor importance. It will also be noted that when living rooms or bedrooms are adequately lighted from elsewhere, as in containing rooms, there is no restriction as to extending the building to the rear.

I have attempted briefly to examine the two principal reasons why our bye-laws have allowed houses to be built on wrong lines; I have indirected the directions in which I consider that we must look for remedies to those evils which arise from cramping house frontage, and I have made one definitely new proposal. The importance of sunlight in combating disease is being increasingly appreciated, and this alone should be sufficient to carry through reforms in the direction indicated in this paper; but this is not all. The imponderables weigh a great deal. We must realise that happiness and contentment have a place in economics, that they lead to a higher outlook and to better results.

A stranger, on entering any of our great cities by train, must be astounded at the squalor that our practice of building narrow-fronted houses has rendered inevitable; narrow-chested houses breed narrow-chested people, and it is astonishing that a country rich in bye-laws, regulations, statutory rules, and discretionary demands, has yet tolerated the erection of square miles of such dwellings. A man in congenial surroundings is more likely to take a pride and interest in his work than one who, in drab surroundings, regards life and work as drab necessities. If we cannot devise bye-laws that, directly or indirectly, preclude the type of house shown in Fig. A, Plan 3, we must confess that bye-laws are incapable of ensuring housing conditions that admit of the moral and physical welfare of the community, and that the whole system of bye-laws is a failure.

Competition News.

The Governors of the Kelvinside Academy War Memorial Trust invite designs for a simple War Memorial Tablet to hold about 127 names, and to cost not more than £200. Schedules of particulars can be obtained from Mr. John T. Tulloch, C.A., Secretary, 209 West George Street, Glasgow.

The Secretary of the R.I.B.A. has been informed that the Town Hall and Municipal Offices Competition, Colombo, is limited to architects practising in the East.

The President of the Royal Institute of British Architects has appointed Mr. John Begg, F.R.I.B.A., as assessor in the competition for Raffles College, Singapore.

A pamphlet containing notes on the planning of sanatoria, infectious diseases hospitals, and other public health institutions by Mr. John Wilson (F.), F.R.S.E., principal architect, Scottish Board of Health, has now been published and may be obtained at the Royal Institute of British Architects.

The awards of the judges in the "Owen Jones" and "Mulready" competitions, conducted by the Royal Society of Arts, have been issued. The prize for the best architectural decoration was won by Rex. W. Woods, of the Norwich School of Arts; Miss C. Honor A. Howard-Mercer, of the L.C.C. School of Art, was awarded the Mulready prize for mosaic work; Henry W. Keil, of the Guildford School of Art, a prize for wood and cabinet work; F. Smith, of the Blackburn Municipal College, a prize for tapestry work; Walter J. Bartrum, of the L.C.C. School of Art, a prize in the carpets class; and Ivan Stanway, of the School of Art, Macclesfield, a prize for a design for printed linoleum.



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MANCHESTER
Trafford Park.

EDINBURGH
St. Andrew
Steel Works.

GLASGOW
Westburn, Newton.
Office: 19 Waterloo St

BIRMINGHAM
Office :
47 Temple Row.

NEWCASTLE-ON-TYNE
Office :
Milburn House.

REGISTERED OFFICES: 2 St. Andrew Square, EDINBURGH.

An Order for Metal Ceilings.

An interesting case, which raised the important point as to who should be liable for orders given by an architect, for a building job—the architect or the builder—was heard on Friday, in the Bow County Court. The plaintiffs were the Steeleonite Stamping Co., Ltd., of 415 Old Ford Road, E., steel merchants, and they sued three Tonbridge, Kent, residents, Fredk. G. Willard, 18 Waterloo Road, architect; F. J. Alwork, Stephen Street, outfitter; and B. Bing, of 47 Priory Street, builder, to recover £25 11s. 4d., for steel ceilings supplied.

Mr. Davis appeared for the plaintiffs, Mr. Horniman for Willard, and Mr. Hillman for Bing.

In opening, counsel said that the architect defendant gave orders for metal ceilings, for work at Alwork's premises, never disclosing any liability but his own. Later he said that Alwork was the owner of the property, but meanwhile he gave a certificate in favour of the builder for £60, and the builder had actually paid £20 on account to the plaintiffs.

Mr. Max Haymen, managing director to the plaintiffs, said he was asked for an estimate for metal ceilings by the architect, and later heard that the price was accepted. Subsequently he received the order and was told to deliver to Bing, who actually sent his vans for the goods. That was in August, and in the November the architect personally gave a further order, the metal ceilings to be delivered to Bing, which was done. Long after this he heard of Alwork, and that there had been a builders' estimate. They pressed Willard for the money, and then got a cheque for £20 from Bing, which they said they would accept if it was on account of the debt of Willard. Later they got a letter from Willard saying Bing was liable, to which they replied that Willard had ordered, and would be held responsible, but if he paid within a reasonable time no writ would be issued. In reply they got a certificate from Willard for the £25 11s. 4d., which was sent to Alwork, but his retort was that he had already paid Bing £60 for the work on the certificate of Willard. It would thus be seen that each one was trying to put the liability on to the other, the whole trouble being that Alwork, for whom the work was done, had gone into bankruptcy. In cross-examination, the witness said it was true Willard's paper said he was an architect and surveyor, but as he did not disclose any principal, they concluded he was buying for himself, as many architects did. The witness was asked about a letter of the August 26 in which Willard was alleged to have written "Re metal ceiling for Alwork. The contract for this alteration has been given to Bing, builder, and when he has finished I will issue a certificate, and he will pay," but he denied having received it, although it was possible the manager had. The witness was then asked why he applied to Willard at one time for a certificate, and he said it was all mixed up, and the real thing was that they wanted to get a cheque. Witness considered that the man who ordered the goods should pay for them if he did not disclose a principal. By Mr. Hillman: The only transaction they had had with Bing was the cheque for £20. This closed the plaintiffs' case, and Mr. Willard then gave evidence, and said that he was employed by Alwork for the carrying out of alterations. Metal ceilings were wanted, he asked for estimates, the plaintiffs' were the lowest and the order was placed with them, but he was sure he told them Bing was the building contractor. On November 20 he called on the plaintiffs to order some metal ceiling for some additional work, which came to £6 12s. 9d., and told them to send it to Alwork. They then told him that they had had a cheque for £20 from Bing, and asked if he was all right, and he told them "Yes." The only way he brought the liability to the plaintiffs was by saying "Re work at Alwork's," which, as this was a sub-contract, was the correct way to do it. He contended that the builder was liable, and that no architect would have ordered different to the way he did.

Henry Bing, builder, gave evidence, and said that the original contract of his was carried out before Willard ordered the steel plates. By certificates from Willard he had received £531 16s. from Alwork, but had done work for £713 13s. 9d. He had proved in Alwork's bankruptcy for £181. He had charged £25 10s. 9d. for the fixing of the steel ceilings, and had not asked for payment for the steel. In cross-examination his own account was put before him in which it said "To supplying ceiling," and he said that how it got into the account was a mystery. The first order to the plaintiffs was for £21 10s., and he was asked by Willard to pay £20 on account for him, when he got a certificate for £60, which he did, and the balance 30s., had been paid into court. Willard himself ordered the balance of the metal ceilings. It was usual for the builder to order everything and the architect to condemn it if he wished, not for the architect to order it.

Eventually Judge Snagge gave a verdict against Bing, the builder, for all but the last lot ordered, £6 12s. 9d., and costs.

General.

The list, given in our last issue, of candidates who passed the Special War Examination of the R.I.B.A. omitted the name of Mr. J. K. Parker.

Mr. R. Mauleverer Roe, F.R.I.B.A., of 70a Basinghall Street, E.C., died last week at his Twickenham residence. The deceased, who was in his sixty-eighth year, was elected an A.R.I.B.A. in 1881 and Fellow in 1889.

Mr. Sydney C. Gordon, of Finsbury House, Blomfield Street, E.C., has been appointed quantity surveyor by the Metropolitan Water Board in connection with their proposed pumping station buildings required in connection with the Littleton reservoir, which are estimated to cost £100,000. The Works Committee made the following recommendation: "That, notwithstanding the scale of fees approved by the Board on January 10, 1913, in respect of the rates to be paid for the preparation of bills of quantities for works, the estimated cost or contract price of which does not exceed £70,000, authority be given for payment at the rate of 1 per cent. in connection with the preparation of the bills of quantities in respect of the Littleton pumping station buildings and appurtenant works."

Trade Notes.

The Walthamstow Council have accepted a tender of the Walker-Weston Company for the supply of 11,027 square yards of reinforcement for the relaying of concrete foundations at Woodford Main Road both sides of the tramway. The reinforcement is the Walker-Weston Single-Layer Type No. 124. This reinforcement is made in sheets to suit span of roadway and obviates cutting and longitudinal joints, and the reinforcement is delivered in flat sheets which do not require straightening.

In response to requests, and encouraged by the success of their provincial showrooms, Messrs. Parker, Winder & Achurch, Ltd., the Birmingham hardware merchants and manufacturers, are now opening offices and showrooms at 40 Craven Street, Strand, W.C.2. In these convenient and central showrooms, London and provincial buyers can study the many excellent lines of this large hardware house, including Empire woven-wire fencing, Empire chestnut paling, Coburn sliding door track, Excelsior screens, extension ladders, diaphragm pumps, Eagle combination grates and so on. We are confident that visitors will receive courteous attention at 40 Craven Street, and will without doubt occupy their time there to good advantage.

We are informed by Messrs. Brown & Tawse, Ltd., of 3 London Wall Buildings, E.C.2, that in consequence of the qualities of B. & T. Reinforcement being recognised by local authorities, several very important orders have been placed with them recently. Among these should be mentioned repeat orders from the Middlesex and Kent County Councils, Acton Borough Council, Penge Urban District Council, Dover Corporation, etc. A considerable number of orders have been received from builders and contractors. These facts speak well for this particular form of reinforcement, especially as the Reinforced Concrete Department of Messrs. Brown & Tawse, Ltd., has only been in operation for just over twelve months.

The most efficient thing of its kind we have examined is the "Helix" curtain rod. From time to time various devices for opening and closing curtains appear on the market, only soon to disappear into the limbo of forgotten things by reason of their defects. This new patent will doubtless meet a better fate. It should certainly appeal to our readers. For one thing it is an engineer's job rather than an upholsterer's bracket—that is to say, it is simple and built to endure rather than complicated and built for subsequent repair. The "Helix" principle is simplicity itself. It consists of two spirals, one each, right and left hand, fixed to the metal rod, which revolves in roller-bearing brackets. This rod is revolved by an endless cord running over a V pulley, through a cord guide at the side of the bracket, which allows the cord to be pulled at any angle without coming off the pulley. Curtain rings are placed on the rod in the ordinary way and are attached by hooks to the curtain. As the rod and spirals revolve, the spirals convey the rings automatically along the rod and draw the curtains together or apart, without the strain usual on the first hook. When the curtains are closed together or are fully drawn back the rings slip over the spirals, thus preventing overdrawing. The end hooks on the curtains, being hooked into an eye on the bracket at either end, hold the curtains in position. No curtain is too heavy, too long or too light for the "Helix," which operates four curtains as easily as one, whether fixed in a bay or a straight window. It is as applicable to a cinema or theatre curtain as to one in an ungetatable position behind a dressing table. There are no little pieces and nothing to get out of order. The Helix Curtain Rod Co. inform us that everything except the tubes and castings is made by them at Henry Buildings, Gresse Street, Rathbone Place, W.1.

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The Wrong End of the Stick.

MR. ABRAHAMSON, who is described as "Prospective Liberal Candidate" for the Cannock Division of Staffordshire, has written a pamphlet on housing, a copy of which has been sent to us. The prospective candidate has presumably to offer the intelligent voter something, but we are a little surprised that Mr. Abrahamson has thought it opportune to offer another plateful of Dr. Addison's stew. The writer begins with a picture of the rapid growth of urban districts, stoutly affirms that private enterprise has failed, abuses the Ministry of Health, and proposes to follow out its abandoned policy! Even the figures quoted are those of Dr. Addison. Again we hear of 500,000 houses, the cost of which, however, is limited to £350 each, including land. The entire programme is to be undertaken by a *firm of contractors* or alternatively administered by the Ministry of Health in conjunction with the local authorities. Does Mr. Abrahamson even remotely visualise what 500,000 houses mean, and does he imagine that a single firm of contractors could deal with a number of scattered housing schemes between John o' Groat's and Land's End, and what does he mean by his alternative scheme? It is not necessary to go into the arguments advanced by this energetic politician, who will, we hope, be rejected by the intelligence of Cannock; but it may be as well to once more recapitulate the objections to the course proposed.

Let us assume—as we are asked to do—that a large proportion of the population of the country cannot pay an economic rent for the accommodation they want. If this is the case, we may reasonably ask what is the cause of the difficulty. Must it not be that either the market for employment is too small in this country, or, on the other hand, that the wages paid for labour are too low? In the first place, we know that there are said to be nearly two millions unemployed at the present time, while many of our industries are so handicapped by the enormous burden of taxation employers have to meet that they find it difficult to pay the current rates of wages, and impossible to increase them. Now, we cannot end unemployment by housing the unemployed, who also need food and clothing as well as houses; but we can add still more to the burdens which weigh on the industrial community by increasing its load of taxation for unremunerative work. Surely, if conditions are such as Mr. Abrahamson pictures, the remedy is not State-aided housing, but State-aided emigration. The real solution, if the facts are as stated, is not to keep the unemployed near a non-existent market, but to enable them to start where their own efforts may enable them to pay for what they require. We see nothing in State housing but a pernicious system of charitable relief which remedies nothing, and which, as has been proved, has brought a certain section of the building trade to a standstill. Mr. Abrahamson asks why private enterprise does not begin to operate when the provision of State housing has been stopped. The answer to this question is obvious and two-fold. In the first place, no one has any confidence that our rulers have made up their minds on this or any other subject, and

the class of men who provided housing before 1910 have in many cases had their business broken up or sought other fields for their activities. When a body has been moving for some years in one direction it must be brought to a standstill before it can begin to move in another, and we are now at that dead point. In the second place, State housing has been answerable for a great part of the enormous inflation of building costs which has occurred, and the housing speculator worked on so narrow a margin that he cannot afford to enter the market again until it is clear that building prices have reached a stable level.

This fact is clearly proved by the experience of those who have built houses for the middle classes since 1920. It is often difficult at the present time to sell such houses for what they have cost, not because they are not wanted, or because they are badly planned, or because people cannot afford to buy, but mainly because it is considered—erroneously, we believe—that by waiting men will buy at cheaper rates.

As a matter of fact, building was too cheap before the war, and wages too low; the man who built had a favourable opportunity which will not occur again.

In addition, the speculator is wise to be wary, because that most infamous and unjust measure, the Rent Restrictions Act, is still in force, and even seems likely to have a longer lease of existence. It was enacted as a war measure, though why the Government, which lavishly spent the nation's money and piled up department on department, should have penalised the property holder we do not know. The Act should have been coupled with a measure of compensation to owners which would have been the barest equity, but until it is gone no resumption of activity can be expected.

We do not think the evil is so great as that which Mr. Abrahamson depicts. We do not believe that the bulk of the workers of this or any other country are unable to pay an economic rent for the accommodation they require, but, being human, it is clear they will try to squeeze what they want out of the State.

Statesmanship is shown both in doing what is just and refusing to do what is unjust even if a refusal arouses discontent among some. It is statesmanship of the last order which has for years been deficient in our policy, and it is this statesmanship which must be employed if we are ever to recover from the damage caused by war.

If there is a large section of the population who cannot maintain themselves here, relief must be sought by emigration to other lands of the Empire, nor must we forget that it may be an illusion to imagine that the great increase of the population which took place here in the nineteenth century is likely to be maintained in the future. We were for many years the first industrial country in the world: we are to-day one of many all striving for markets and competing against each other. Our future may depend more on the manner in which we husband our resources than on striving for the ideal which is probably unattainable, though its advocacy may bring political success.

Our Illustrations.

DRAWINGS MADE BY GEORGE BASEVI ON "THE GRAND TOUR."

RALLI BROS.' WAREHOUSE, KARACHI, INDIA. E. B. HOARE (HOARE & WHEELER), Architect.

The office for Messrs. Ralli Bros. is in Wood Street, Karachi (Sind), and, with godowns, covers an area of three hundred feet square. The front, with its projecting cornice, is built in Jodhpur (Rajputana) stone. The interior courts and arcades are constructed with stone from the Jungshahi (Sind) quarries. This stone is of a deep yellow hue and is fairly durable.

The north godown (or warehouse) is a building of two storeys, each being 300 feet long, 30 feet wide and 20 feet high. The main south godown is of similar dimensions, but of one storey

only, with additional large areas between the arches carrying the upper floors.

The main offices are on the first floor, and, with the exception of those on the north and east sides, are doubly protected with verandahs 12 feet wide. The floors throughout and the roof are of reinforced concrete. The lifts are by Messrs. Smith, Major and Stevens, of Northampton. This enterprise occupied a period of two years and three months in building; the contractors were Messrs. Wheeler Bros., of Reading, and it was carried out under the direct superintendence of Mr. E. B. Hoare, F.R.I.B.A.,

Notes and Comments.

The Building Guild.

The Building Guild appears to have been very successful in enlarging the scope of its operations, and claims to have contracts in hand amounting to between two and three million pounds. It is claimed that experience shows that very little education or training in administrative or managerial work is necessary, and that wage-earners could do this work as well as others. The Guild is going to form a building society, which will invite weekly subscriptions of 2s. 6d. from its members with a view to provide capital for the erection of houses the tenancy of which will be given to some of those who have subscribed; and it is hoped that in Birmingham alone 50,000 subscribers may be found. It is not clear to us what inducement will be offered to those who do not succeed in obtaining houses. Is it to be the return of the amount subscribed without interest, or is interest to be offered? If so, the movement is surely borrowing ideas from those of ordinary business concerns, which are anathema to the Guild; if not, we should doubt whether the subscriptions will be forthcoming. The leaders of the Guild speak of the formation of a bank to finance themselves; but here again the bank must surely live, as other banks do, by making profits. The whole gist of the movement seems to us to be this: if the average man works better and more rapidly under the Guild system than under an ordinary employer, the Guild will supplant the private employer; but if not, it will not. In other words, it all depends on the selection of a system under which men work most efficiently, and not on more recondite theories.

"Ad Quadratum" and the Crux.

We are glad that Professor Simpson and Mr. Gilbert Scott have been appointed members of the Norwegian Commission which is to investigate the rival opinions regarding the methods proposed for the restoration of Trondhjem Cathedral, as it forms the centre of the controversy that Mr. Lund has raised. We understand that an architect of eminence in Norway produced a scheme which was disapproved of by Mr. Lund, who gained the support of the Government, with the result that the work was taken out of the architect's hands. We cannot judge of the merits of the work proposed by Mr. Lund from the drawings published in "Ad Quadratum," and it will be most interesting to hear what decision the Commission arrives at. Mr. Gilbert Scott may, of course, be so impressed by the marvels arrived at by the use of Mr. Lund's system that he will hurry home to apply the same methods to what he still has to do at Liverpool. On the other hand, he may not. In any case, the reputation of the author of "Ad Quadratum" will be increased or diminished as a result of the Commission's findings.

The Rent Restrictions Act and the Building Slump.

The "Manchester Guardian" describes the building situation in that city in the following terms, which are worth noting as the expression of a Radical organ on the effect of measures which may be said to be of a Radical tendency:—

At the present time house agents describe the real property

market as "practically dead," and the invariable reasons given for this are the general depression in trade, the Rent Restrictions Act, the higher assessments, and uncertainty as to the future. Even the fact that prices have fallen somewhere in the neighbourhood of 33 per cent. during the last twelve months does not seem to have been much of an incentive. People are only buying when absolute need compels, and many of the houses now on the market are there because owners want the money in order to keep their businesses afloat. There is hardly such an individual as an active speculator in house property at the moment, owing to the high prices asked, the heavy cost of upkeep, the operation of the Rent Restrictions Act, and the high rates and taxes, and the odds are that he will not reappear until there is a definite revival in trade, more stability in finance, and at least some amendment of the Rent Restrictions Act.

We do not believe that the amendment of the Act would be efficacious; what is required is its entire repeal. It was *ab initio* an unjust measure, and as long as it is unrepealed no one can be certain that it will not at some future date be amended by increasing, and not decreasing, its stringency. If a relief of tenants is necessary in the national interests, it is the Government and not the private owner who should pay for the accommodation required.

The Spoiling of the Country.

A "Londoner" writes a very good letter to the "Spectator," in which he points out the growing evil of the manner in which beautiful country is broken up and spoiled for the erection of "desirable bungalows," with their usual accompaniment of untidy fowl-houses and other out-buildings. Speculative building of the older order at least took place over restricted areas usually facing well-defined roads and served by sewage systems; but neither want of lighting nor even water systems stops the more flamboyant growth of the bungalow, which, like some epidemic disease, may break out anywhere. The remedy which is overlooked is in the application of the provisions of the Housing and Town Planning Act, the existence and use of which are usually ignored, but the clauses of which are sufficiently extensive and far-reaching to eliminate most of the evils from which we suffer. We should be very glad to see the Act made obligatory and applied to the whole country, instead of the few districts where applications have been made to put it into operation. The average man is too lazy to do anything beyond grumbling at accomplished results; and in the plethora of legislative measures with which we are now deluged it is difficult to remember what powers we have and the manner in which they can best be used.

The Late Mr. Dudley Hardy.

We regret to have to report the death, at his house in Powis Square, Kensington, of the well-known painter and illustrator, Mr. Dudley Hardy. Mr. Hardy's illustrations, with figure subjects, were brilliant and in favour with the public; some of his later admirable watercolour landscapes have been noticed in our columns. Mr. Dudley Hardy was born in Sheffield in 1867, and was the eldest son of Mr. T. B. Hardy, who was known as an artist and illustrator.

The International Exhibition of Art of the City of Venice.

May—October, 1922.

By Selwyn Brinton, M.A.

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The present exhibition at Venice is the XIIIth Biennial Exhibition of this nature, these exhibitions being subsidised by the Italian Government and the municipality of Venice, and held in the fine group of buildings specially designed and erected for these biennial art displays in the grounds of the Public Gardens of Venice. Italy, though a relatively poor country, especially after her sacrifices in the late war, recognises her obligations to art; or, I might even say, takes the view that art, both in the preserving for herself of the treasures of her past, and in the creation of a national school, both of sculpture and painting, is a valuable national asset, and one which no country with any pride in itself or economic intelligence can afford to neglect. Thus this fine series of Venetian exhibitions, which owed so much to the energy and initiative of Senator Fradeletto, have throughout received the support of the highest authorities; and this year the "Biennial" was formally opened by Prince Humbert, and visited a week later—this being his first official visit to Venice since she had passed, comparatively unscathed, through the fiery trial of the war—by King Victor Emanuel himself.

The central group of buildings in the Giardini Pubblici of Venice is again mainly devoted to Italian art; and here there are to be noticed first certain retrospective displays of interest—namely, of the works in sculpture by Antonio Canova (1757–1822), of portraits by Francesco Hayez (1791–1822), and of paintings by Carlo Bonatto-Minella (1855–1878).

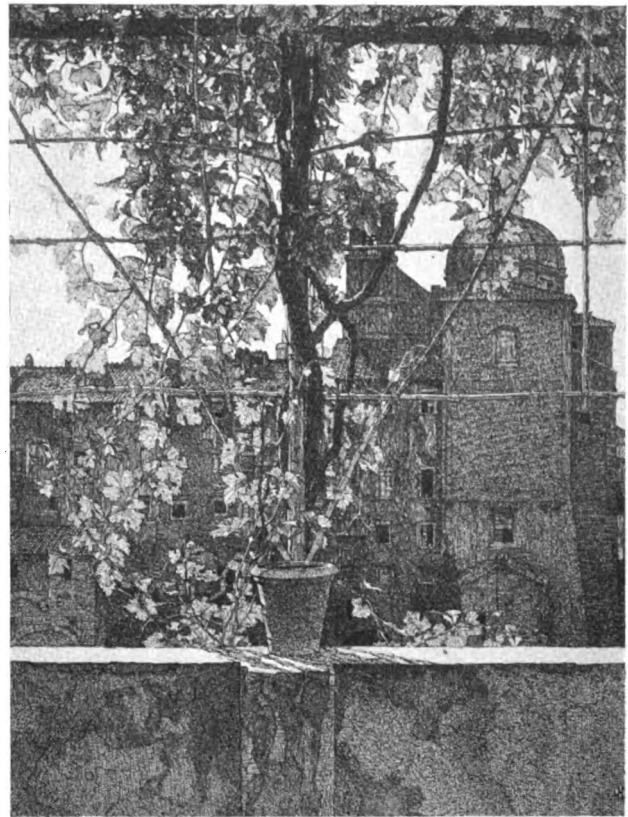
Canova may be less the idol of the public in our days than when Foscolo dedicated to him his "Graces" and Napoleon said that for genius such as his there is no law; but his place is secure as a very great master of his art, and with this display of twenty of his works Venice, as Ugo Ojetti has well remarked, not only obeys a duty of grateful recognition to her faithful son—for Canova was born at Possagno in November of 1757—but announces the return of art, as might have been foreseen, to his own creative message . . . "not, indeed, to the pedagogic imitation of the antique, in which the style of his followers became weakened, but to the obedience of those laws without which, whether it be called classic or romantic, there is no art, and to the love of that national, and even with us regional, tradition which Canova felt and followed so faithfully."

In the works shown here the portraits claim a first place—notably, those of his patron Napoleon (as First Consul) (plaster) and the marble busts of Pius VII. and of Cimarosa, both from the Museum of the Capitol and in marble. Francesco Hayez was a younger contemporary and an admirer of Canova, whom he knew personally; not very well known outside Italy, his portraits ("Count Cavour," Academy of the Brera at Milan, "Alessandro Manzoni," and others, twenty-one in all) belong to their time and well merit attention. It has been said of Hayez that by external observation he arrives at the penetration of the world of the spirit, and often very near to perfection.

But, after all, it is the moderns who count for most here, and the individual exhibition of paintings by Professor Ettore Tito claims a front place for the art of modern Venice. Other individual displays of interest are those of Albin Egger-Lienz (figures and landscape), who belongs, I believe, to the newly acquired provinces of Italy; of Eugène de Blaas, who has specialised in the modern life of Venice and the Veneto; of Amedeo Modigliani, an artist who studied in Italy, but finally settled in Paris, and died there only two years ago; of the portrait work, always possessing its own distinction, of Lino Selvatico, and the sculpture in marble and bronze—highly finished, but possessing a certain deliberate archaism of treatment, his relief of "La Famiglia" is an example of this—as well as a collection of some thirty drawings in chalk or pen by Adolfo Wildt.

In the present exhibition Professor Ettore Tito, as I have

suggested, remains among the Italians *facile princeps*. The position which two years ago was claimed and secured for the art of Antonio Mancini, both as to artistic merit and sales, comes this year to the Venetian Professor. Among his later work the "Portrait of my sons," a couple of fine young men who I can remember when they were still boys, claims a first place. Among his scenes of popular life the delightful "Domenica a Fobello," among his figure subjects the "Aurora" and the "Deposition," which goes some way back in point of time, are to be noted. Guido Cadorin seems to be an artist who is coming to the front in this and recent exhibitions. I may mention here his delightful "Summer—A Fountain with panels in mosaic and 'stucco graffito,'" the mosaic work in which was done in Venice; his "Deposition from the Cross," painted in fresco, and his "Portrait of my Father" is a strong, sincere portrait study. Benvenuto Disertori is an exquisite draughtsman and etcher, who has devoted himself in recent years to a series of studies of the old cities of Italy: a good example of his work, which I reproduce here,



"RONCIGLIONE NEL CIMENO." By BENVENUTO DISERTORI.

is his etching of Ronciglione nel Cimeno, admirable in composition and in the beautiful detail of the subject. Among Venetian painters Beppe Ciardi and his sister, Signorina Emma Ciardi, are well represented.

On the whole it may be said that Italy holds her own against the visitors from across the Alps, who occupy the pavilions of Holland, Belgium, Hungary, France, Great Britain and Germany. In the French Pavilion the individual exhibitions of Maurice Denys and of Emile Bernard are of first importance. In our own Pavilion there are no artists specially showing alone, but a good general display of modern British art, amounting to nearly two hundred paintings, among which those of Walter Bayes, Hughes Stanton, Glyn Philpot, Kerr Lawson, Leonard Richmond, Augustus John and George Clausen may be noted. On another occasion it would be more telling if some special display could be arranged to good effect in our own Pavilion, as has been done this year by the Dutch, the French and the Italians.

Modern Methods in Building Construction.—XXIX.

By Albert Lakeman, M.S.A., M.C.I.

CONCRETING—(continued).

Reference was made in the previous notes to the use of steel towers for hoisting the concrete when chutes are used for transporting; and although timber is extensively adopted there are schemes wherein exceptionally high towers are an advantage, and under these circumstances steel will be preferable, as giving increased safety. Also, it may prove economical, in the event of the contractor having several large schemes in view, to invest in a steel sectional tower which can be dismantled and be re-used indefinitely, because a timber tower that is erected and used for several months is likely to be damaged during demolition and handling, even when bolted connections are used, and the replacement of members will prove expensive and sometimes cause delay if the need for them is not realised until the re-erection has been commenced.

The steel towers can be obtained in sections about 20 feet long, or as separate members, consisting of steel angles, for the main vertical members, with braces, gusset plates and bolts all prepared for assembling. The head and base frame work, connections for guying and the guy ropes can also be obtained complete, and the work on the site is therefore reduced to the minimum.

In the previous illustrations the chutes were shown as carried by overhead cables, from which they were suspended by steel ropes passing around pulley blocks and trolleys to allow the level to be changed, and this is the method usually adopted when long lengths of continuous chuting are required, but in cases where the distance from the tower to the place of deposit is comparatively short, a swinging boom is employed to carry the chute. This arrangement has the advantage that the plant is very flexible, as the swinging boom is able to turn through about 180 degrees and the first length of chute, which is suspended from the boom and counterbalanced, can be moved round to cover a large area, as this can be revolved through a complete circle. By the addition of extra weight, to provide the necessary counterbalance, a second length of chute can be added to allow the area of operations to be increased.

An example of this type of plant is shown in fig. 157,

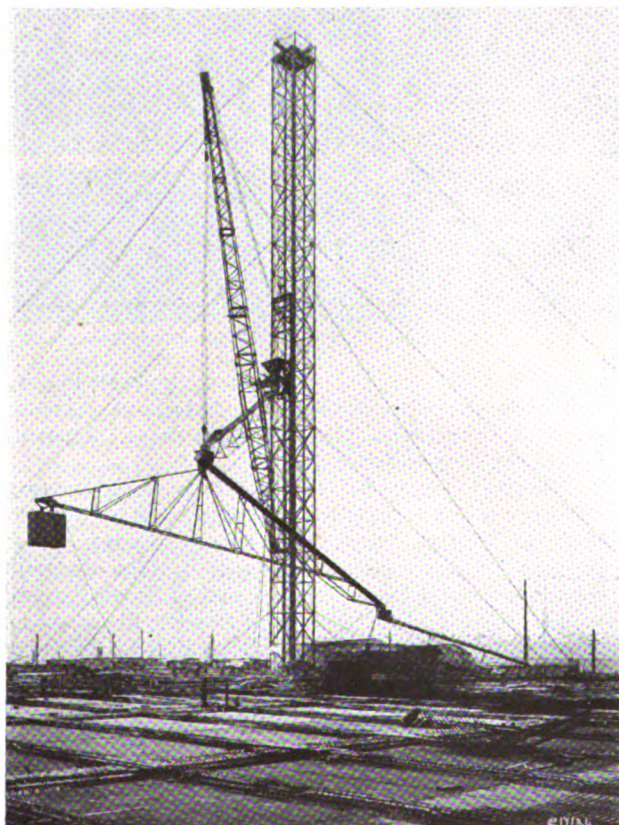


Fig. 157. STEEL CONCRETING TOWER WITH BOOM.

where a Ransome steel sectional tower—200 feet high—was installed to give an almost circular concrete placing radius of 150 feet. Only the top portion of the tower is seen in the illustration, as the lower part is hidden by the work already executed, but it is probably the largest equipment of this kind used in this country. The guying of the tower, the swinging boom, and the counterbalanced chute are clearly shown, and the general principle described above can be easily followed. Detailed descriptions of all the accessories, such as hoisting bucket, hoppers, chutes and gear generally, are not necessary here, as sufficient has been given to show the application of the tower and chute method in modern work and all the details can be readily obtained from the makers of this class of equipment.

Concrete Mixers.—The concrete mixing machine is such an important feature in the concreting operations that the subject of concreting can hardly be considered complete without some reference to the merits of the types in use. It is, however, not necessary to describe in detail the different machines on the market at the present time, as such description would be likely to result in tedious reading, without any real benefit to the reader, and it will be sufficient to deal briefly with the principles which govern the design and manufacture of the types, as distinct from individual machines. Generally speaking, concrete mixers can be divided into two kinds—*viz.*, (a) batch mixers and (b) continuous mixers—and opinions appear to differ among engineers and contractors as to the merits and demerits of the two types. The author has met with many contractors who always insist on the use of batch mixers, and, again, there are others who prefer the continuous mixers and state that a better output of reliable quality is obtained by the use of these. The author, as previously stated, prefers the batch mixer, and there are several reasons for this. In the first instance, the quality of the concrete is dependent on the proper proportions of the raw materials being maintained, and while this condition is theoretically met in the average continuous type, practically it cannot always be guaranteed.

The maker of the continuous type will state that the ratios of the different materials can be regulated, and by the adjustment of the levers and pointers to the required positions the measuring will be automatically performed and there is no danger of error occurring.

In order to obtain the desired result, however, it is essential that the raw materials are continuously fed to the mixing drum, and as the machine continues in motion whether the whole of the materials are available or not it will be clear that any break in the supply of cement, fine or coarse aggregate, even for a short period will result in a product from the mixer which is deficient in some essential part, and the product is likely to find its way into the work. Any temporary hitch in the supply of materials to the mixer is therefore liable to result in defective product unless instantly realised and taken care of by stopping the mixer, whereas with a batch mixer the charge cannot be completed and the mixer will not be producing at all if materials run short. It is better to have no output for a few minutes than produce material which is defective and which will possibly lead to serious trouble if used.

It is true that hoppers can be provided on continuous mixers for keeping a constant supply of raw materials available at the feed points, but unless the labourers filling these hoppers are careful to keep them continuously fed one or the other is likely to run out, and a temporary distraction from duty will often result in a hopper being empty before it is realised. If the sand or coarse aggregate should become arched or held up at the hopper mouth—and the author has seen that happen frequently, especially when the gratings for regulating the size of the particles are removed as being a nuisance—the correct proportions will not be maintained. Owing to the continuous nature of the mixing operation it is necessary for the labourers to become mechanical in their work, and equipment which is so exacting in its demands and which allows no margin for the

human element is likely to produce, at times, an uncertain mixture. The machine is set to give a certain definite output per hour, and it will go through the operations required to produce the specified amount whether it is properly fed or not, and in this respect it will differ from the batch mixer, where the output is not fixed at a definite amount, but will be dependent on the number of times that it is charged with the requisite materials, which are gauged before the mixing is commenced. Another defect that frequently occurs with the continuous type is that the amount of water used will be found to vary, and the resultant mix will be of variable consistency. Instead of a definite charge of water for a definite quantity of raw materials given by the batch mixer a continuous supply must be averaged on the drum, and as this must be introduced through some type of outlet that produces a fine spray it is necessary to ensure a constant head of water and a free passage at all times. When mixing, the spray outlet frequently becomes covered with wet concrete and particles which tend to reduce the flow of the water and any variation in pressure will mean a difference in the quantity supplied to the mixing. With a batch mixer a fine spray is not essential, and the use of a measuring tank for each batch ensures a consistent amount as long as the supply pipe to the tank is sufficient to fill it. It is no exaggeration to say that the author has seen material being produced at times from a continuous mixer which resembled absolutely a mixture of small stones and water only, and its classification as concrete would be ludicrous. It is, of course, possible to produce good concrete from a continuous mixer, but from the above notes it will be seen that it cannot be guaranteed, as there are too many uncertain factors. Some continuous mixers are manufactured with a short mixing drum, and the passage of the materials is too rapid to give an ideal mix and there is no opportunity for the different parts to be thoroughly incorporated in the dry state before the water is reached. The author considers that a long cylinder is absolutely essential on the continuous type to prevent the concrete being discharged too quickly after the mixing is commenced, because the operator has no control over the amount of the mixing, which is pre-determined by the makers of the machine. In the batch mixer the raw materials can be thoroughly mixed in the dry state before the water is added, and the wet materials can be turned over as many times as necessary to thoroughly incorporate the whole mass. The point may be raised by an advocate of the continuous type that the human element enters too largely into the time of mixing in a batch mixer, and it is, of course, possible for the contents of the mixer to be discharged too soon, but the tendency generally will not be in this direction, as it is the machine which is working while the actual mixing is taking place, and a very rapid discharge means that the rest between the charges is reduced and the men must work more quickly.

Generally speaking, the output from the continuous type will be less than that which is possible from the batch type, in spite of the fact that the latter may be employed to give a more thorough mixing, and the reason for this is that in the continuous type only a comparatively small amount of material will be in the mixing drum at one time, as the feeding will be comparatively slow, while with the batch mixer a large charge will be dealt with at one time. The maximum output from a large size continuous mixer will be from 10 to 15 cubic yards per hour, while with a batch mixer an output of as much as 60 yards per hour is possible and an output of 30 yards per hour is quite easily accomplished.

On a very large scheme it is extremely important to produce large quantities of concrete per day, especially when large masses of work are to be executed, and the most economical machine to use will be a large capacity batch mixer that is efficiently fed and discharged, with good facilities for transporting the material immediately. The latest type of mixer which has been placed on the market in this country is the Ransome "Aero" mixer, for which several advantages are claimed. It is of the continuous type, although the makers describe it as neither an ordinary batch nor ordinary continuous mixer, but an entirely "new

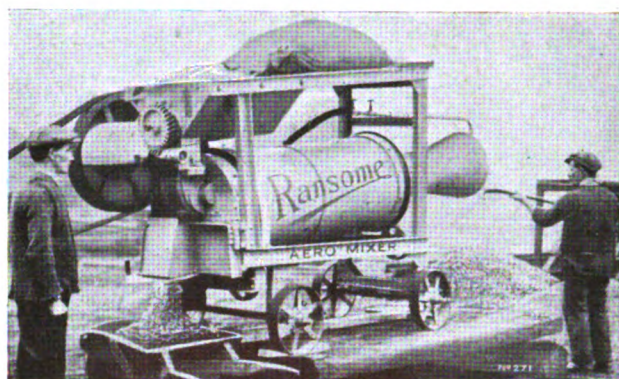


Fig. 158. "AERO" MIXER, TYPE B, BEING LOADED AND DISCHARGING.

principle" mixer. The new principles are really those applied to the grading of the materials and the application of the Portland cement, but it is certainly of the continuous type and, therefore, in the opinion of the author, it is still subject to some of the disadvantages given above in the comparison made between the continuous and batch mixers. An illustration of an "Aero" mixer is given in fig. 158, where the machine is shown as being loaded and discharging. It has a long mixing drum, and in this respect is satisfactory, but it will be seen that continuous feeding is necessary, and the labourer who is loading must not fail to keep up the supply or the proportions will be affected.

The machine has to be raised on a platform to give sufficient height at the discharge end for the receptacle to be placed under the discharge, and this necessitates the feeding end being at a high level, which involves extra labour. The proportions of the materials are arranged by setting the levers controlling the feed to the desired ratios, and the sand is made to fall over and between the particles of the coarse aggregate as they are carried forward, and the two materials enter the mixing drum together. The aggregate is sprayed with water just before entering the drum, and it is passed through a screen which causes the particles to separate, and the cement is then applied in the form of a cloud caused by this being automatically fed and blown into the drum. It is this last operation which makes the machine a distinctive one, and the principle is, of course, a good one, as the damp particles of the aggregate while being tossed around in the drum are made to pass through a cement cloud, which is certain to cause some of the cement to adhere to each particle and thoroughly coat every part. The makers claim that less cement is necessary to make good concrete, or if the same proportion of cement is used then the resultant concrete is stronger, but if the materials are proportioned in a proper manner it is difficult to see why a batch mixer should not give equal results in this respect, as no cement is wasted, no more water is necessary for mixing, and the mixing operation can be quite thorough. A strong point is also made of the arrangement by which the voids in the large aggregate are automatically filled by the sand, but as the approximately correct proportions must first be regulated by the hopper doors when passing in the materials to the shaker tray, there cannot be very much margin in this respect, and any stoppage in the supply of the fine aggregate would still result in unsatisfactory material on account of the continuous nature of the mixing operation. The difficulty of the hand-feeding above mentioned can be overcome to a certain extent by the adoption of an automatic bucket elevator, which will raise the materials from the shaker tray under the loading hopper to the chute leading to the drum, and this accessory to the equipment must be considered a necessity when the mixer has to be raised up sufficiently high to allow the discharge to operate over a side tipping waggon on a narrow gauge track. The mixer is made in two sizes, the larger of which has an output of 8 to 10 cubic yards per hour and the smaller an output of 4 to 5 cubic yards per hour. This amount is quite all right for small schemes, but it will not be sufficient for large masses of concrete work which have to be executed quickly, and the output could not compete with that produced by a large capacity batch mixer. There is one other point which

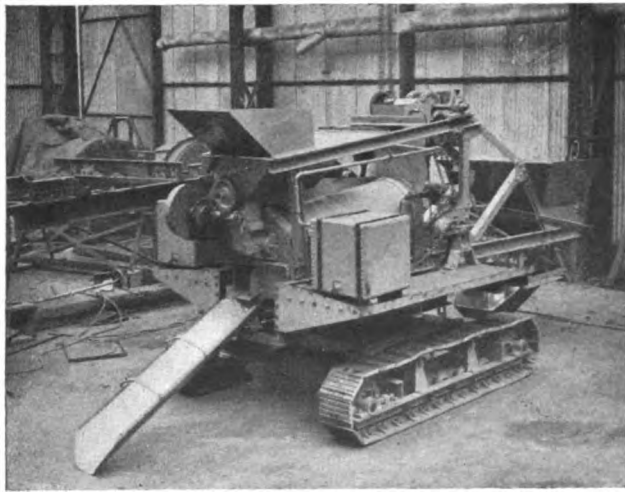


Fig. 159. "AERO" MIXER SELF-CONTAINED, WITH POWER FOR DRIVING AND TRACTION.

must not be overlooked, and that is the loss of simplicity which must follow the introduction of automatic operations inside a machine engaged on what may be termed *rough* work, because some function may not be carried out efficiently at all times and the product will be affected when parts get out of order. In the batch type there is practically nothing to get out of order, and the machine must obviously break down entirely before the mixing operation is affected. An interesting machine is that illustrated in fig. 159. This shows an "Aero" mixer self-contained, with power for driving and traction, and it should prove a useful piece of equipment for work when considerable mobility is required and no good tracks or roads are available. Some detailed notes of this type of mixer have been given because it is essentially modern and it affords a good example of the development that is taking place in concrete making machinery. The endeavours to manufacture good continuous mixers have been great, and there is no doubt that the principle is worth while investigating, but many machines have failed in the past because they have been made merely continuous and not necessarily good mixers. The idea appeals to many contractors because continuous output means operations carried on without a break, with a speed determined by a piece of machinery which runs at a definite rate, but a thorough investigation will reveal the fact that the operations are also frequently limited by the capacity of the machine and better output could be obtained if this limit was removed.

(To be continued.)

PART I.—I. Introduction, Steam shovels, Jan. 13; II. Steam shovels, Trench diggers, Jan. 20; III. Grab buckets, scrapers, Jan. 27; IV. Drag-line excavators, Feb. 3; V. Derricks and cranes, radial loader, paving-breakers, Feb. 17; VI. Surplus Soil Transport (Hand Labour), Feb. 24; VII. Surplus Soil Transport (Horse-drawn wagons, Steam-driven wagons), Mar. 3; VIII. Surplus Soil Transport (Steam-driven wagons), Mar. 10; IX. Surplus Soil Transport (Steam-driven wagons, Petrol wagons, Narrow-gauge track with wagons), Mar. 17; X. Surplus Soil Transport (Narrow-gauge track with wagons, Trucks on Standard-gauge track, Electrically-driven trucks and vehicles), Mar. 24.

PART II.—XI. Foundation Work (Ordinary soils, Soft soils), April 7; XII. Foundation Work (Soft soils), April 17; XIII. Foundation Work (Soft soils), April 21; XIV. Foundation Work (Soft soils), April 28; XV. Foundation Work (Soft soils), sheet piling, May 5; XVI. Foundation Work (Soft soils), steel-sheet piling, May 12; XVII. Foundation Work (soft soils), steel-sheet piling, pumping, May 19; XVIII. Foundation Work (Soft soils), pumping, May 26; XIX. Foundation Work (soft soils), foundation piles, June 2; XX. Foundation Work (soft soils), foundation piles (cont.), June 9; XXI. Foundation Work (soft soils), foundation piles (cont.), June 16; XXII. Foundation Work (soft soils), Waterproofing, June 23; XXIII. Foundation Work (soft soils), Waterproofing (cont.), June 30; XXIV. Waterproofing (cont.), July 7; XXV. Water Supply, July 14; XXVI. Concreting, July 28; XXVII. Concreting (cont.), August 4; XXVIII. Concreting (cont.), August 11.

Royal Institute of British Architects.

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The Registration Committee.—The President, Messrs. H. D. Searles-Wood, George Hubbard, A. W. S. Cross, M.A., C. Heathcote, The Hon. Secretary, Messrs. W. Gillbee Scott, C. B. Flockton, Sydney Perks, F.S.A., Delissa Joseph, Herbert Shepherd, W. G. Hunt, H. G. Fisher, Major Harry Barnes, M.P., Messrs. Arthur Welford, W. E. Riley, Heaton Comyn, W. R. Davidge, T. R. Milburn, A. O. Collard, Frank Woodward, G. Topham Forrest, Percival M. Fraser, L. A. Culliford, C. Lovett Gill, W. W. Scott-Moncrieff.

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The Sessional Papers Committee.—The President, The Hon. Secretary, Messrs. Martin S. Briggs, Walter Cave.

The Annual Dinner Committee.—The President, The Hon. Secretary, Messrs. Walter Cave, William Woodward.

ADDITIONAL MEMBERS TO THE FOUR STANDING COMMITTEES.

Art Standing Committee.—Messrs. F. R. Hiorns, W. R. Davidge, C. Lovett Gill, H. P. Burke Downing, Walter Tapper.

Literature Standing Committee.—Messrs. J. A. Gotch, Harry Sirr, Basil Oliver, L. A. Culliford, W. H. Ward.

Practice Standing Committee.—Messrs. T. R. Milburn, Percival M. Fraser, Francis Jones, Harry Teather, W. Henry White.

Science Standing Committee.—Messrs. J. Ernest Franck, S. B. Russell, E. Fiander Etchells, J. E. Dixon-Spain, A. W. Moore.

The Halifax Town Council have agreed to the appointment of a committee to interview the Ministry of Health with a view to obtaining permission for the Corporation to erect, at its own expense, 500 working-class houses, free of Government control.

The Grand Tour of an Architect.—IV.*

By W. H. F. Basevi.

In March 1817, in a letter addressed to his father from Rome, George Basevi writes: "Each succeeding day convinces me that I have done right in quitting Soane. I still continue to think him extremely clever, but in a particular style. I am of opinion that I can form for myself a better. Had I stayed much longer with him I might have become so prejudiced as to see objects with his eyes instead of my own. Then I had better have stayed in England than come here. It appears to me that more is learnt here in observing the failures of great men when they searched after novelty and left all rules behind them than in studying absolutely the remains of Roman grandeur. Of the latter little remains, and that little very much ruined. Of the five or six temples, of Jupiter Sutor (now called that of Castor and Pollux), Antoninus and (illegible), and Jupiter Tonans, the others have little more to boast of than their rich materials. The arches I never could admire. To be sure the Temple of Peace is a very fine building, as is also the Colosseum; but they afford little study for an architect."

In the same month, March 18, he writes:—

"I am just now going to commence a great drawing in the Campo Vaccino. Hitherto the weather has prevented me. I think I shall learn a great deal from it. As yet I have measured nothing; but soon intend trying one to convince myself as to the utility of this mode of study."

"I was complimented the other day as having made the best drawing of the Colosseum of any in Rome. As for being the best I will not answer, but I rather think that I can affirm it is the largest that has been attempted of so difficult a subject. I have adopted a different method from the other architects. I make pictures of my architectural studies. This combination is, I am convinced, beneficial to me. It takes me a little longer time, but teaches me landscape composition, and makes my studies which all other architects keep only to themselves more interesting. I have about twelve that I should not fear to show to anybody."

It is permissible to wonder whether Basevi found his true vocation in architecture, and whether the real bent of his genius would not have found its natural outlet in painting. As previous extracts from his letters have already indicated, pictures had an irresistible attraction for him; while his constant tendency was to convert his architectural studies into landscape drawings.

"How completely Canova has turned away the public feeling for paintings! They are scarcely mentioned here. In the Vatican a room apart is appropriated to paintings in which are some of the most exquisite of Raphael, his Transfiguration, a most brilliant Dominichino, and in fact all the Pope's pictures that are returned from Paris. . . I am still drawing the temple of Castor and Pollux. To combine this as a picture and a study together has cost me immense trouble. I have made five sketches, but as yet am not satisfied. This is not time lost, it rouses all of me. I am convinced if you were here you would think I attend too much to the painter's part. This is one of the great points that I differ in from the other architects, and even from Mr. Soane, for the principles of composition are similar in all the sister arts."

"I went the other day with Briscoe to see the villa of Papa Sali, one of the first works of Vignola. I was very much struck with the light, playful, and delicate taste that pervades it; though abounding in faults the whole combined has a fascinating charm about it that commands admiration. Briscoe was so struck with it that he wanted to have a plan and elevation taken of it. I told him where he might find a book containing it. I want to know who is the engraver of the Aurora of Guido that Uncle D'Israeli used to have hanging over his chimney."

Apparently he recalled the engraver's name, for a week later he writes to his brother.

"Tell my Uncle D'Israeli I have just seen the Aurora of

Guido. His print gives a very good idea of it, but like all Morghen's, is rather too heavy. An old engraving by Freji gives the character of Guido much more accurately. I am no great admirer of the modern Italian school: they are too heavy and want freedom. Their grand excellence is laboured. . . The school of Italian engraving is low except in the engraving of statues. In this particular branch they are above the most, but they can go no further. They have no idea of giving the effect of colour. Each figure under their hands becomes a statue; thus the unity of a composition is destroyed, and no grand effect is produced."

In May 1817, evidently in answer to some question, he writes: "The name of the rival of Canova is Alberto Thorwaldsen. He is a Dane. He came to Rome to study, and having finished his regular education strove in vain for several years to gain employment and a patron. He was too poor to buy marble, so had nothing to show but a model of Jason. Despairing of success he had packed up all his things and was on the point of departing from Rome for his native country, there to try for better prospects, when Mr. Hope accidentally came into his study and was amazingly struck with the grandeur of the style in this figure. He asked him if he would like to do it in marble. Of this there was no doubt. On Mr. Hope asking him the expense he mentioned something very low not thinking him in earnest. Mr. Hope gave him a draft for half the money on the spot, the remainder, hearing of his extreme poverty, a few days after. As the work advanced Thorwaldsen gained fame. The war breaking out obliged Mr. Hope to return to England, and the statue has remained ever since unfinished. When Mr. Hope arrived this year the first thing he asked after was the home of this sculptor. Thorwaldsen had completely forgotten him; but when he claimed the statue, and related the whole of the circumstances, he could not refrain from tears. He called him his benefactor, and attributed to his humanity all his after success. This want of employment may have made Thorwaldsen what he is. He used to spend all his time in the Vatican, and became so familiarised with the antique that like Pusey (?) he thinks exactly as the Romans would have thought had they treated the same subject."

To escape the heat of Rome during the summer months he started for a long long tour in northern Italy about the beginning of July 1817. Passing through the small republic of St. Marino he went on to Bologna, where he spent some busy days in visiting the picture galleries, and in sketching interesting bits of architecture. Thence *via* Padua he travelled by barge to Venice, which he calls "a fleet of houses." Here he gained his first intimate acquaintance with the architecture of Palladio. "I admire him more than I can express," he says, "I have already drawn an immense advantage from his genius, and I see clearly that this will be a most important tour for me. I die to arrive at Vicenza to be surrounded by his immortal works."

Arrived at Vicenza his hopes were so fully justified that he could not tear himself away. He spent most of August in that town sketching and making studies. In one of his letters we came across an admission which again raises the question whether his real vocation was not art rather than architecture—especially landscape, which always crept into his architectural studies. Incidentally it also explains why he did not appreciate Byron's poetry. In a letter dated August 10, 1817, he writes: "I am more versed in Thompson than any other poet. He has been my favourite companion ever since I quitted England. I can almost repeat his Seasons by rote. I generally take a walk of three or four miles with him in my hand; and having chosen the most beautiful scene I can find, sit down to read him till time to dress for the evening." Anyone so whole-heartedly devoted to a nature poet like Thompson might well find himself out of sympathy with the work of such a moody egoist as Byron.

From Vicenza he travelled to Mantua and Verona; but all the while he felt that Palladio was calling to him, and it was not long before he returned to Vicenza. Palladio

* For preceding articles see July 7, July 21, and July 28.

indeed made so lasting an impression on his mind that in later years when he married he christened one of his sons James Palladio. The impression was not only lasting, but at the time, appears to have been very disconcerting. We must remember that during the whole of the preceding twelve months his attention had been devoted almost entirely to the masterpieces of ancient Rome. Then on reaching Vicenza he came suddenly upon the work of Palladio. The immediate result appeared to him to be disastrous: he felt himself, as the French say, *désorienté*.

He is painfully aware of feeling lost, though he cannot

account for his mental state. On returning to Rome at the end of September he writes: "I feel this a very critical period with me. I have now studied in a great measure both the ancient and modern fabrics. I feel my style is now forming itself, and I tremble; for, of many things that offended my eye very much before I left, some appear now not so objectionable. I cannot explain this sensation; but if I am sliding into the wrong path I have made up my mind, before doing anything, to study every building over again in the Campo Vaccino, and then proceed to modern ones."

(To be continued.)

An American House.



HOUSE, RIVERDALE, N.Y. DWIGHT JAMES BAUM, Architect.

We give reproductions from the "American Architect" selected from a large number of views which have appeared in that journal of a house built for Mr. Wm. P. Hoffman, at Riverdale, New York, from the design of Mr. Dwight James Baum, architect. This seems to us an unusually fine essay of the Georgian type of design very carefully detailed and full of character. It seems to be based more on English Georgian precedents than on those of which, in spite of the objection of Mr. Eberlein, we consider are best described as "Colonial" architecture. For that phase of design, though Georgian in character, is very sharply differentiated from the sturdier and heavier style which

characterises Georgian work here. It was not only in the attenuation of the columns used that the style is marked out as a thing apart, but in such details as chimneypieces and staircases where detail was used which finds no counterpart in our English buildings and is not to be simply dismissed as being due to the greater use of wood. The colonial type of building rather seems to us to be the outcome of the work of men who realised they were producing detail every part of which would be given full effect in the greater clearness of the American climate, while its severity was probably the unconscious outcome of the Puritan strain in the New England character.



WEST APPROACH.



SERVICE PORCH.

Studies of the English Sculptors from Pierce to Chantrey.*

XVIII. Some Minor Sculptors—(continued).

(All rights reserved.)



MONUMENT TO JAMES BRYDGES, DUKE OF CHANDOS, AT WHITCHURCH, LITTLE STANMORE. By ADRIEN CARPENTIER.

V.—ADRIEN CARPENTIER (1677?—1737).

Less has been published about Carpentier than about any other sculptor with whom we have so far dealt. Walpole doesn't give his Christian name, which, indeed, is not surprising, since it does not occur in Vertue, and only describes him as assistant to Van Ost at Canons; but some material has been gathered by Sir Lawrence Weaver in his "English Lead Work," to which I owe the particulars given in this paragraph. Thoresby, the antiquary, wrote in 1702, "Sat up too late with a parcel of artists. . . Mr. Carpentier, the statuary and others," and the same authority visited this sculptor's yard in Piccadilly in 1714, where he saw "curious workmanship of his in marble and lead," so that Walpole's contemptuous phrase, "kept a manufacture of leaden statues in Piccadilly," by no means covers the facts. Some of these leaden figures can be traced; that figure of Fame, for instance, and the Roman Soldier which Viscount Dillon bought for Ditchley in 1722-3, and which are still *in situ*. The prices paid for them were £35 and £20.

But, as we have often seen, Walpole did not get all he could from Vertue's notes, and something more may be gleaned which throws light on the history of this colleague of so many great sculptors in the service of the Duke of Chandos. Vertue tells us that it was of the painter Peter

Eude (an artist unknown to the biographers) that "Mr. Carpenter Statuary learnt the rudiments of drawing," and as both Thoresby and Vertue use the English form of his name, it is clear that he was thoroughly Anglicised. His son of the same name is described by Edwardes, a good authority, as "of French or Swiss extraction," and beyond this we cannot go; but for all his commercial leaden art the father was a great sculptor, even if he only rose to the height of his opportunity in the one great monument which he designed, and of which we shall speak presently.

Carpentier's work at Canons is unspecified, but one of the Vertue notebooks contains an interesting account of him which it is rather surprising that Walpole did not quote: "Mr. — Carpenter, or Charpentier, the Carver or Statuary, a Man in his time esteemed for his skill, made many workes for noblemen and others of distinction, in stone and marble, was for some years principal assistant (to Mr. Nost Carver) in Modelling and Carving. afterwards when he workt for himself, he did abundance of workes for the Duke of Chandos at Channons, at last he there built some houses and an Inn, and in the Middle of the road way put up a Statue for a sign—not far from the Duke's gate of his avenue, which I heard gave offence. he would not take it down, or some such affair disgusted his Patron, his houses did not let, and other misfortunes attended him. however, he for many years [lived] in the latter part of his life at his house in the road to High [Hyde] Park—employd his time and study to Cast leaden figures of all kinds, he being more esteemed then ran into much imployment, but soon that was run down in the prices, by underworking, that he had much ado to hold up his head at last. He was a gross, heavy man allways, but age and cares brought him to his end [in margin "aged about 60"] about July, 1737—and was buried in the parish of St. George's, Hanover Square, where he died—he left a son who had been an Idle fellow many years. what he will do hereafter Q[ue]ry." What the "Idle fellow" did do we have seen in his portrait of Roubiliac in the National Portrait Gallery. Our concern here is with the father and the curious story unfolded by Vertue. The fat, obstinate sculptor quarrelling with his bread and butter, gratuitously insulting his ducal patron, and then suffering from the underselling of his rivals in the lead-figure trade—how human he is! It is clear, however, that it was as colleague, not as assistant only, that he worked with Nost at Canons, and it must have been during a recovery of favour with the Duke, and in the Duke's lifetime, that he erected the one great work which can now be traced, the monument to Chandos and his wives in the Mausoleum at Whitchurch or Little Stanmore, once the chapel of Canons, of which an account by the writer appeared in *THE ARCHITECT* for July 21. This colossal work represents the Duke in periwig and Roman armour standing between his wives—Mary, daughter of Sir Thomas Lake of Canons (*ob.* 1712), and Cassandra, daughter of Sir Francis Willoughby of Wollaton (*ob.* 1735)—here for the first time illustrated, and evidently erected between Cassandra's death in 1735 and the sculptor's two years later. The fine construction of the work, which suggests that Carpentier must have had considerable feeling for architecture, is much above the average of the age, and the figure of the Duke, in spite of his classical costume, is stately and even pathetic; but the kneeling figures of the wives, which suggest the Flemish or North French saints or mourners of sixteenth-century tombs, are of even higher quality. They give the impression—rare, indeed, in eighteenth-century art—of being truly devotional, while the epitaph, which begins "In hopes of a Joyful Resurrection," adds to the religious impressiveness of the whole.

It seems certain, as we have said, that this noble monument was erected between 1735 and 1737, at the close, that is, of Carpentier's life, and it represents a *rapprochement*

* For preceding articles in this series see:—Introductory Article, July 1; Nicholas Stone (1587-1647), July 8; Edward Pierce (*ob.* 1698), Sept. 2; Caius Gabriel Cibber (1630-1700), Sept. 16; Grinling Gibbons (1648-1721), Sept. 30; John Bushnell (*d.* 1701), Oct. 7; Francis Bird (1667-1731), Oct. 21; Peter Scheemaker (1690-1771?), Dec. 9 and Feb. 10; John Michael Rysbrack (1693-1770), Mar. 3 and April 7; Louis François Roubiliac (1695-1762), April 21, June 16 and June 23; Joseph Wilton (1722-1803), June 30; Some Minor Sculptors, July 21, August 11.

between him and his offended patron. Now comes an interesting point. In the abbey church at Sherborne is the superb monument by the elder John Nost, briefly alluded to in our account of that sculptor, representing John Digby, Earl of Bristol, in his robes, holding a coronet, between the standing figures of his two wives, one of whom holds a burning lamp, the other a flaming heart; above is a splendid carved pediment resting on columns and surmounted by the Digby arms.

It seems impossible to believe that these monuments were wholly independent. Carpentier, as we have seen, was Nost's principal assistant for some years, and must have seen this work in progress, if he did not work on it himself. When applied to by the Duke of Chandos, the scheme of the Bristol monument, his master's *chef d'œuvre*, must have occurred to him when a problem so similar was presented, and he adopted his master's solution, only substituting kneeling figures for the standing wives of the Earl of Bristol, and Roman armour for the robes of an English peer.

Most of Carpentier's other work is now undiscoverable, unless by a happy accident such as that which led the writer to examine the tombs in the church of Amersham, and there to discover what is lacking in the Chandos monument—the signature of Carpentier on the tomb of one of the Drakes of Shardeloes. When "Mountagu (*sic*) Garrard (*sic*) Drake of Shardeloes, Esq. Of his Piety to the Best of Parents," erected a monument to "Montagu Drake, Esq., son of Sir William Drake of Shardeloes and Jane his wife," it was to Carpentier he turned for a design, a black marble sarcophagus set in a niche surmounted by cherubs and a coat-of-arms, and bearing two medallion portraits of high artistic excellence. The two misspellings in the inscriptions noted above are of importance when we come to the signature, which runs "And^a Carpentier facit," the last word roughly corrected to "fecit," evidently by a later hand. Three undoubted blunders in one simple inscription prepare us to suspect "And^a," an impossible form; and when we realise that the sculptor's son was Adrien, it is easy to see that a stonecutter's error is responsible for "And^a," and that the sculptor's Christian name was that of his son the portrait painter.

Thus with the help of Vertue we have been enabled to say something of the sculptor's age and career, and with that of the signature at Amersham to establish his Christian name; and if Dallaway is correct in ascribing to him a share in his master Nost's statue of George I., once at Canons and later in Leicester Square, we can now connect his name with those works of art apart from the leaden garden figures already identified by Sir Lawrence Weaver. It may not be out of place to add that two fine portraits of his son hang in Salters' Hall; and it is much to be wished that other works by father and son could be identified, to complete the history of the "gross fat man" and the "Idle fellow" whose achievements are here briefly and tentatively presented.

VI.—GIOVANNI BATTISTA GUELFI (*fl.* 1714-1734) has hitherto been the shadow of a shade, all that has been given about him by successive Dictionaries of Artists being taken wholesale from Walpole's brief and inadequate account, which mentions only a single work. It is the more satisfactory therefore to have recovered several works by him, one of which is signed in full, and to be able to present him, with the help of Vertue, as an example of a type not found elsewhere in our gallery of sculptors, the foreigner who comes to England, not to settle in it as his adopted country, but to teach the barbarians for once what Art really is.

Guelfi, according to Walpole a native of Bologna, was a pupil of the Roman sculptor Camillo Rusconi, whose numerous activities ranged from the botching of antique statues to the execution of copies of famous statues for English patrons such as Sir Robert Walpole and the production of colossal saints for many Roman churches. In the first two fields he found an apt pupil in Guelfi, who came over to England about 1714 under the patronage of Lord Burlington, for whom he executed many works both at Burlington House and Chiswick House under the



MONUMENT TO MR. SECRETARY CRAGGS IN WESTMINSTER ABBEY. By J. B. GUELF.

direction of the ubiquitous William Kent. It was probably through Lord Burlington that he received a commission to restore that portion of the Arundel Marbles which in 1691 Sir William Fermor, afterwards Lord Leinster, had purchased from the bankrupt sixth Duke of Norfolk for the adornment of Easton Neston. The results were disastrous, for though one or two of his restorations are praised by Vertue, Dallaway's criticism is only too true. "He misconceived the character and attitude of almost every statue he attempted to make perfect, and ruined the greater number of those he was permitted to touch." The preposterous results may be seen in Chandler's "*Marmora Oxoniensia*" of 1763, after the statues had been presented to the University by Lady Pomfret, but the restorations were removed about forty years ago at the recommendation of Sir Charles Newton, when it was found that irreparable damage had been done by the reckless cutting about of the Marbles and by the amateurish use of iron instead of bronze clamps, which had rusted and seriously injured the surface of every statue. But the wonder is that anything was left for Lady Pomfret to present, since many of the statues had been first placed along the garden front of Easton Neston and subsequently piled, as Vertue saw them, "in a large greenhouse in the gardens, dry and lockt up," though a few were placed about the hall and staircase.

Guelfi's work was apparently admired at the time, since he found other patrons in Northamptonshire. The Duke of Richmond and Lennox employed him to erect a bust of his Duchess (*ob.* 1722) in the Cardigan Chantry at Deene, which in 1734 was placed in a classical monument with columns and pediment. This is really an admirable work, but its special importance lies in its signature, "Joannes Baptista Guelfi Romanus fecit." Here we have at last the sculptor's Christian name; but whether "Romanus" indicates his birthplace or his artistic school is an open question—the latter probably, since Walpole probably had Lord Burlington's authority for describing him as a native of Bologna.

Yet another Northamptonshire patron was the Earl of Rockingham, for whom he executed the monument with an urn and mourning figure of the Hon. Thomas Wentworth Watson in York Minster, an excellent engraving of which, by George Vertue, may be seen in a volume lettered

"Monuments, English Antiquities, etc," in the possession of the Society of Antiquaries. It is highly probable that the standing figure of Lady Arabella Oxenden in the church at Rockingham is also his, since it is wholly in his manner, though it suggests a Diana rather than an English lady; this work has been admirably engraved in W. H. Hyett's "Ancient Sepulchral Monuments in Northamptonshire" (1817), and is therefore accessible to the curious.

The only works hitherto described as his are the tomb of Mr. Secretary Craggs in Westminster Abbey, of which more must be said, and the rather similar work in the church of Gosfield, Essex, erected by Craggs' sister to her second husband, John Knight. The first of these is famous as erected by Pope and with an epitaph by him; the poet's correspondence with Mrs. Knight shows that he took a deep interest in its progress, and that, owing to Guelfi's illness, it had to be finished off by Francis Bird; though Walpole thought it "graceful and simple, but shows that he was a very indifferent sculptor," there is a dreamy grace about the figure and a richness in the drapery that are not undeserving of praise, though the architectural portions of the monument are incredibly weak, especially the curves of the finials above and below.

Evidently, however, Craggs' family were satisfied, since when his sister, Mrs. Knight, desired to erect a monument to her second husband, John (ob. 1733), it was Guelfi who got the commission. This unsigned work, very graceful in its way, has the sculptor's usual figure and urn—a female figure this time—and is in part reproduced in Bowles' edition of Pope (1807) as an illustration to her letters to the poet; the correspondence was not fully published, however, till the appearance of the standard edition of Elwin and Courthope eighty years later.

We may conclude with the two passages from Vertue's notebooks which embody all that can now be known of the sculptor apart from the works already enumerated.

(a) "Four Busts in Stone are to be made by Signr Guelphi a Sculptor for the Queen's [grotto] at Richmond St I Newton Lock Dr Clark and Mr Woolaston.

"This Signr. Guelpha works under the direction of Mr Kent at the House of Lord Burlington."

If these busts were indeed commissioned, the order was cancelled, since, as we have seen, they were in fact executed by Rysbrack. The most notable thing about the passage, indeed, is that it shows how little Guelfi had acclimatised himself, since here and elsewhere Vertue speaks of him as "Signor," in curious contrast to the affectionate anglicising of such names as Rysbrack and Roubiliac, which Rijsbrack and Roubillac—to give them their original names—themselves adopted; Thoresby's "Carpenter" for "Carpentier" is another example of this practice. The reason for Guelfi's sturdy retention of his foreign title is amusingly given in our second and crucial extract from Vertue:

(b) "Signor . . . Guelfi statuary, some time wrought under Cavalier Rusconi, Statuary of great reputation in Rome. From thence Lord Burlington encouraged, or brought him to England he was some time at L^d Pomfret's Easton [Neston] Northamp^r employd repairing the Antique statues. Afterwards Guelphi was much employd for many years by L^d Burlington, in his house in London, and made many Statues for his Villa at Chiswick, being much continually almost employd for him several years. Also several Busts he did. He much commended him to the Nobility for an excellent Sculptor, procurd him many works in that of the monument of Sec. Craggs Westminster Abbey. He left England 1734, after residing near 20 years. went to Bologna. a man of Slow Speech, much opinionated, and as an Italian thought no body could be equal to himself in skill in this Country. Yet all his works seem to the judicious eye often defective, wanting spirit and grace. its thought that L^d Burlington parted with him very willingly."

Guelfi's works at Chiswick and Burlington House are no longer traceable; that, perhaps, is no great loss. But the conceited artist, with his pompous speech and his insistence on his nationality, is a figure we should be sorry to lose from its very rarity, and we may well be grateful to Vertue for putting down the disjointed notes which

enable us to realise something of a personality so amusing, even if we feel that, like Lord Burlington, we should have "parted with him very willingly."

NOTE.—These notes on the life of Guelfi, in an abbreviated form, will appear in the forthcoming volume of the "Künstler-Lexikon" of Thieme-Bekker.

(To be continued.)

Sheffield Society of Architects.

The annual general meeting of the Sheffield, South Yorkshire and District Society of Architects and Surveyors was held on Thursday, the 10th inst., when the following officers were elected:—

President.—Mr. J. R. Wigfull, A.R.I.B.A.

Vice-President.—Mr. H. L. Paterson, A.R.I.B.A.

Hon. Treasurer.—Mr. R. W. Fowler, F.S.I.

Hon. Secretary.—Mr. H. B. S. Gibbs, A.R.I.B.A., 15, St. James's Row, Sheffield.

Council.—Messrs. W. G. Buck, Licentiate R.I.B.A.; F. E. P. Edwards, F.R.I.B.A.; C. M. Hadfield, F.R.I.B.A.; J. R. Hall, M.S.A.; C. F. Innocent, A.R.I.B.A.; J. M. Jenkinson, A.R.I.B.A.; H. I. Potter, A.R.I.B.A.; C. S. Sandford, F.S.I.; F. W. Wrench, Licentiate R.I.B.A.

The annual report was read and the statement of accounts presented: both were approved, and the outgoing President, Mr. C. B. Flockton, was congratulated on his election as a member of the Council of the Royal Institute. Votes of thanks to the retiring officers concluded the business of the meeting.

St. Paul's Cathedral: R.I.B.A. Fund.

The President of the Royal Institute has received the following letter from Canon S. A. Alexander, Treasurer of St. Paul's Cathedral:—

"2, Amen Court, E.C.4.
4th July, 1922.

"DEAR SIR,—I am writing on behalf of the Dean and Chapter of St. Paul's, to ask your attention to the papers enclosed with reference to the new Appeal for the Preservation of the Cathedral. The Institute sent us, very kindly, a hundred guineas in 1914: and we hoped that it might be possible for you to give us some further support at this critical time.

"Believe me,

"Yours very truly,

"S. A. ALEXANDER,

"Canon and Treasurer."

The Dean and Chapter of St. Paul's are asking for the sum of one hundred thousand pounds for the absolutely essential work of repair on the piers and arches supporting the dome of the Cathedral, which have been declared insecure by the Special Commission of Architects and Engineers appointed last autumn to examine the condition of the building. The cost of the work on the South Transept, now almost completed, has been defrayed by a fund raised by public subscription in 1914. This is now almost exhausted, and a further £100,000 is necessary to enable the repair of the defects recently disclosed by the Commission's report to be carried out. The need is urgent; it has even been suggested that it may be necessary to close the Cathedral for a long period. It is hoped to avoid this extreme course if a generous response is forthcoming to the appeal for fresh funds.

The Council of the Royal Institute have decided to establish a R.I.B.A. Fund and to appeal to members for subscriptions. The Allied Societies of the R.I.B.A. in the Provinces have been invited to open subscription lists in their own districts, and to forward collectively to the R.I.B.A. the amounts so received. The Council itself appeals especially to London architects to send subscriptions, however small, to the Fund, so that a worthy contribution may be made by the Architectural Profession towards safeguarding the strength and permanence of the masterpiece created by the daring genius of Wren. There is no more fitting or sincere method in which Architects can commemorate the approaching bicentenary of the death of one of the greatest of their number.

The list will be closed at an early date, and members are therefore invited to forward their subscriptions to the Secretary R.I.B.A. as soon as possible. A list of subscribers will be published in the R.I.B.A. Journal.

Messrs. Brierley & Rutherford prepared a scheme for the erection by the York City Council of a new public library at an ultimate cost of £39,000. At the last meeting of the Council an amendment was adopted to the effect that in consequence of the shortage of labour, which is materially interfering with the building of necessary houses, the present time is inopportune to proceed with the project.

Royal Archæological Institute. Summer Meeting—IV.

The Ripon meeting of the Royal Archæological Institute was divided into two equal portions of three days each by Sunday, July 23. But, strenuous as the opening days must have seemed to some of the members, it was only the few who accepted the Sunday as a complete day of rest. In the morning a large number accepted an invitation to the 10.30 service at the Cathedral, which was attended in state by the Mayor of Ripon and the Corporation, and at which the sermon was preached by the Right Rev. the Lord Bishop of Ripon. The Bishop asked "What was the use of Archæology?" and answered the question with his text taken from the Acts xvii. 26—"God made of one congregation of men for to dwell on all the face of the earth, having determined their appointed seasons and the bounds of their habitation." It was the business of archæology to study and trace scientifically the unity, the common humanity, in successive ages.

In the afternoon there was an unofficial excursion to Richmond Castle, which gave those who took part in it an opportunity of seeing a type of Yorkshire scenery different from what had been passed in the course of the preceding three days.

Monday, July 24.

A certain amount of disappointment has been felt by those of the members who were particularly attracted by domestic architecture at the complete absence of any notable examples in the opening days of the meeting. This deficiency was first met by

FOUNTAINS HALL.

Of the romantic beauty of this early seventeenth-century house there could be no two opinions. Mr. A. Hamilton Thompson, F.S.A., pointed out to the party that its beauty, beyond one or two details, lies in the general external view. It forms, perhaps, the most picturesque example of the most picturesque house-building period in the country. In Northamptonshire there are a number of very fine and stately mansions of this early Renaissance type—such as Kirby Hall and Castle Ashby; but they are more elaborate than this at Fountains. The charm of the unspoilt elevation and its general symmetry is apparent. Fundamentally Gothic, there is, nevertheless, a strong classical feeling about it. Its mullioned windows are quite different in effect to the sash windows introduced into contemporary work in Italy. Fountains Hall was built by Sir Stephen Proctor, who almost certainly used some of the stonework from the Abbey hard by. It is, on the whole, a thoroughly English production, with very little borrowed from foreign sources, and notably unornamented. Classical influence is seen in the stringcourses and cornices, and in the framing to the central doorway—coupled Ionic columns supporting an entablature with balustrade above. To appreciate fully the beauty of the façade one must look at it as a whole, and as to such points as to how the angle towers fit in with the charming bow window in its centre. In spite of its battlemented skyline, it marks the translation of the fortified house into new terms. The name of the architect who designed it is not known. The owner, doubtless, told him what was wanted and then left him to carry out his work as best he could. Local building traditions fortunately continued after the days of great church building were over. Here there is an instance of work done in local material under the tradition of a local mason or master-builder. It has sprung from the soil under the hand of a son of the soil. In that is its attraction. The plan of the house inside has been hopelessly altered and partitioned up. On the top floor there is a large room with an ambitious though mutilated chimneypiece, and its bow window contains some heraldic glass, probably dating about 1670, which must be a sore temptation to enthusiastic collectors.

A walk of a few hundred yards brings the visitor with dramatic suddenness to what must surely be reckoned one of the wonders of the country.

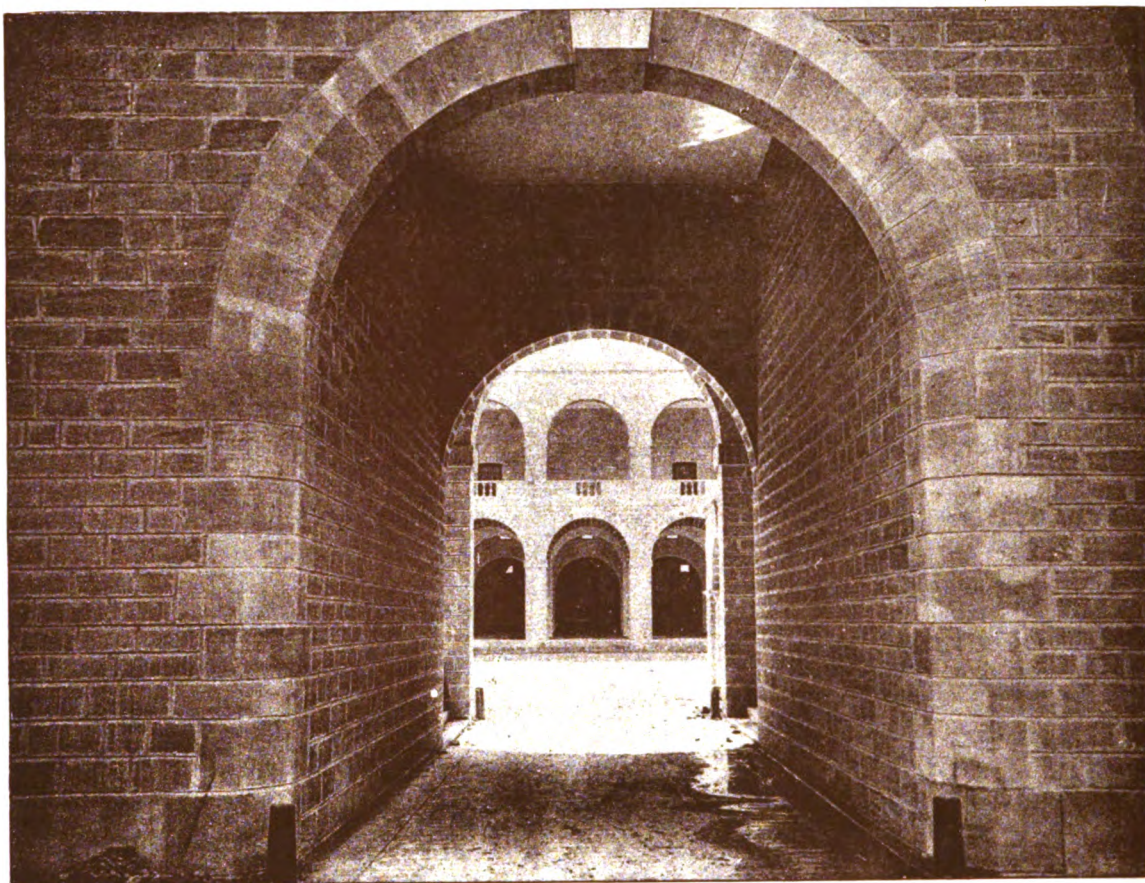
FOUNTAINS ABBEY.

That great antiquary, the late Sir W. H. St. John Hope, M.A., in the introduction to his masterly monograph on this building, says that although it cannot compare in architectural splendour with Tintern, nor in beauty of situation with Rievaulx, Fountains Abbey, from the great extent and preservation of its buildings, and the ease with which they may be studied, certainly takes the first place in importance among the Cistercian abbeys of England and Wales.

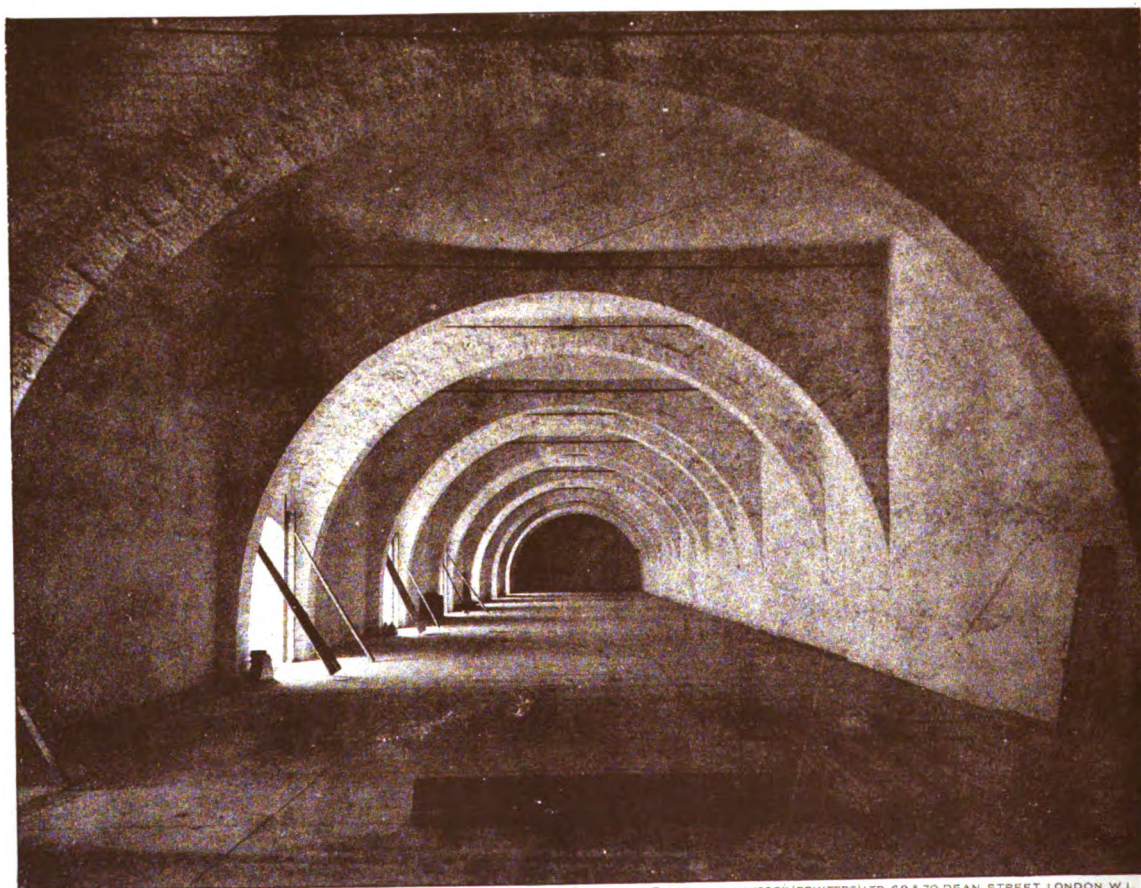
According to a chronicle dictated by Serlo, one of the first monks, to Hugh, a monk of the daughter-house of Kirkstall, thirteen members of the Benedictine Abbey of St. Mary at York determined to leave the monastery, and adopt the stricter Cistercian rule. They met with opposition on the part of their brethren, but received support from Archbishop Thurstan, who assigned them as a site for their monastery "a place remote from all the world, uninhabited, set with thorns, and among the hollows of mountains and prominent rocks on every side; fit more, as it seemed, for the dens of wild beasts than for the uses of mankind." After passing through the winter in much hardship, they sent messages to St. Bernard, the great Abbot of Clairvaux, asking to be admitted into the Order. The messengers returned with Geoffrey, a monk of Clairvaux, who taught the brethren the new Cistercian rule. Mr. John Bilson, unlike Sir St. John Hope, considers it doubtful if Geoffrey had any share in the planning of Fountains, as for the next two years the monks were in such poverty that their abbot went to St. Bernard to beg for permission to settle at Clairvaux. During his absence, however, they were joined by three of the clergy of York who were possessed of considerable wealth. The money was divided into three parts: one for the relief of the poor, a second for their building, and the rest for the necessities of the monastery. The abbey so quickly increased in importance that five years after its foundation—viz., in 1138—a daughter-house was founded at Newminster, in Northumberland. It was the first of many. Although subsequent alterations have done much to obliterate the oldest buildings, considerable remains of them exist; they were laid out on a large scale, and the plan of the present monastery is in the main as that set out about 1135. The first setback occurred in 1147, as a result of the abbot's share in deposing the Archbishop of York. A party of armed knights who had supported the Archbishop came to Fountains; "they broke open the doors and insolently entered the holy place. They rushed in through the offices, carried off plunder, and when they could not find the abbot whom they sought, they set fire to those hallowed buildings that had been wrought with great toil and reduced them to ashes. . . . In this sad crisis all that was saved was their church with the offices adjoining, preserved, as is thought, for the purposes of prayer, and even it was half consumed, like a brand snatched from the burning. . . . The crime accomplished, the knights went away, taking their spoils with them, very little money indeed, but damnation in abundance. . . . The Abbot and brethren, taking comfort in the Lord, recovered strength, and, like mariners after a shipwreck, started on a new voyage. What had fallen they repaired, what was ready to fall they set right. Faithful men of the neighborhood came to their aid, and the fabric arose far greater than before." Opinions vary as to whether the church was finished at the time of this sacrilege. Mr. Bilson considers that Sir St. John Hope was wrong in thinking that to be the case.

The earliest Cistercian churches were mere barns, and there exists no proof that a definite plan type had been evolved before 1130. Then came the wonderful period of expansion. A type of plan was fixed, of which Rievaulx, which was founded from Clairvaux in 1131-2, and has priority of date in Yorkshire, is our best example. The plan consisted of a short square eastern end—the apsidal termination was rejected as a superfluity; north and south transepts, each

THE ARCHITECT, AUGUST 18th, 1922.



LOOKING INTO COURTYARD

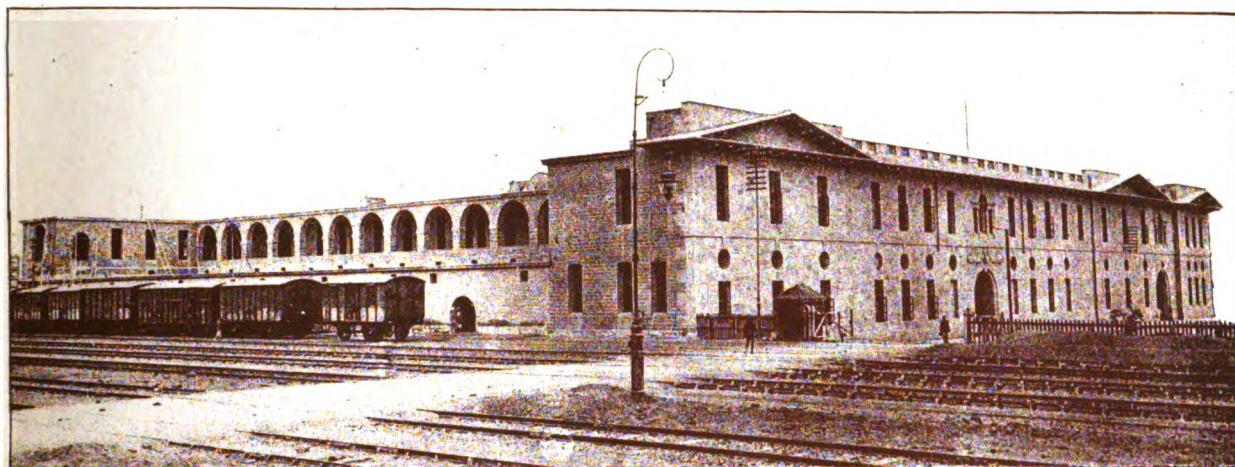


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WAREHOUSE.

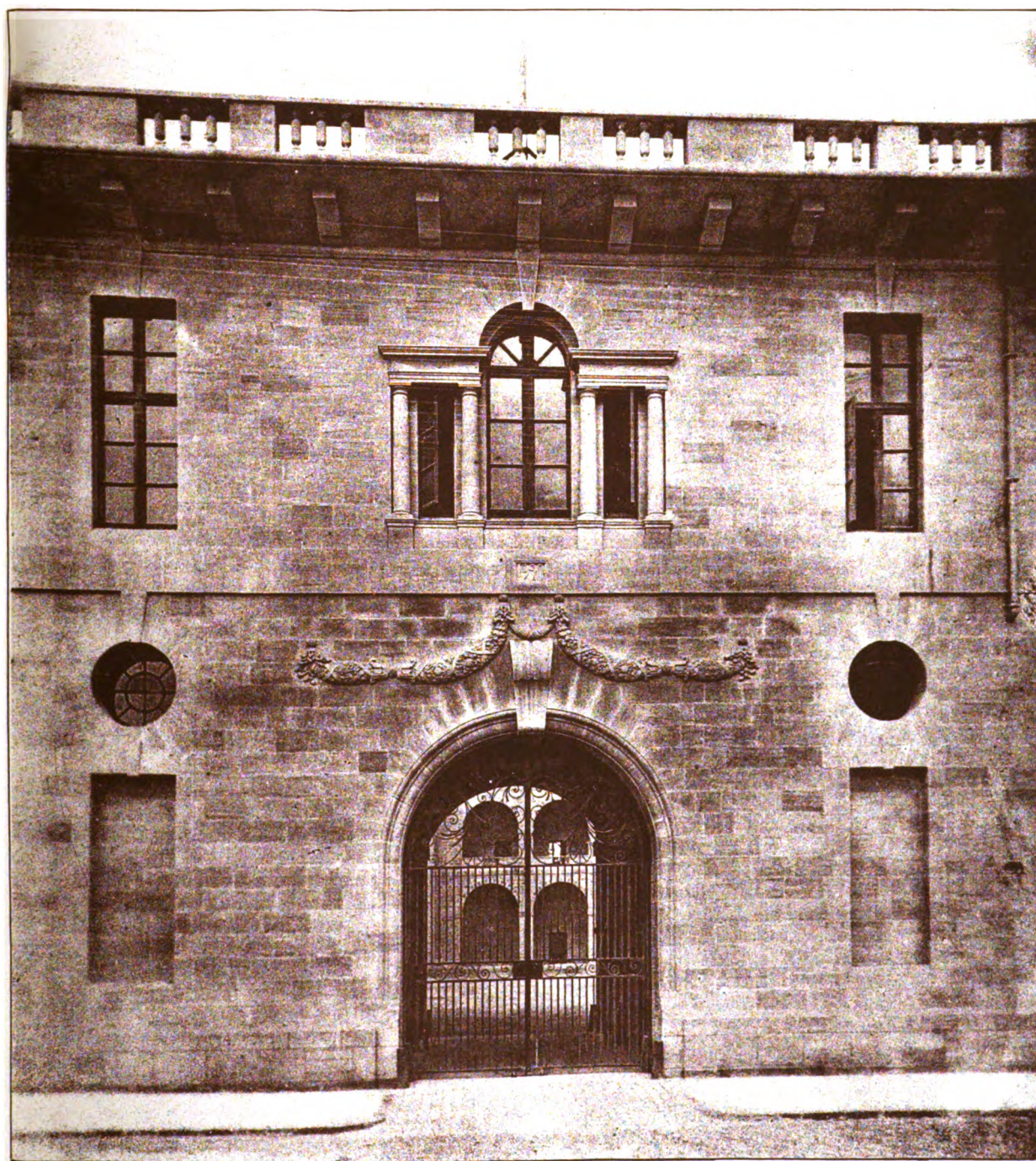
RALLI BROTHERS' WAREHOUSE, KARACHI, INDIA.

E. B. HOARE (HOARE & WHEELER), ARCHITECT.

THE ARCHITECT, AUGUST 18th, 1922.



EXTERIOR VIEW.

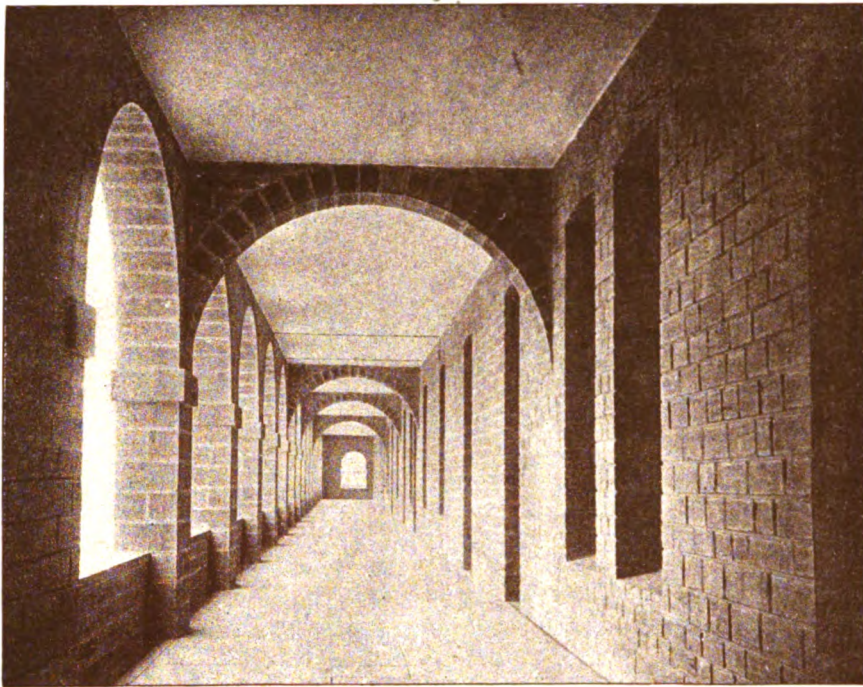


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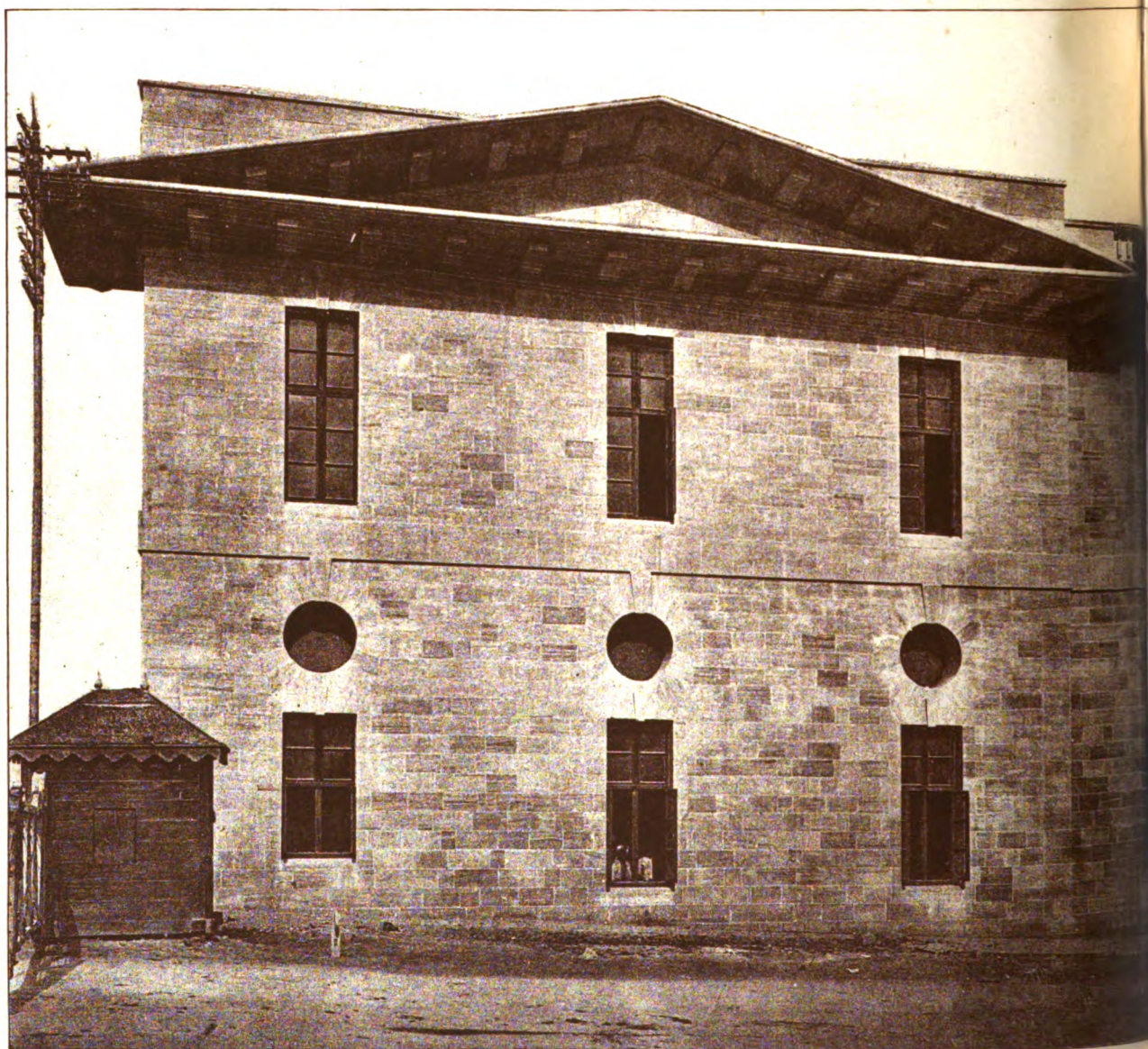
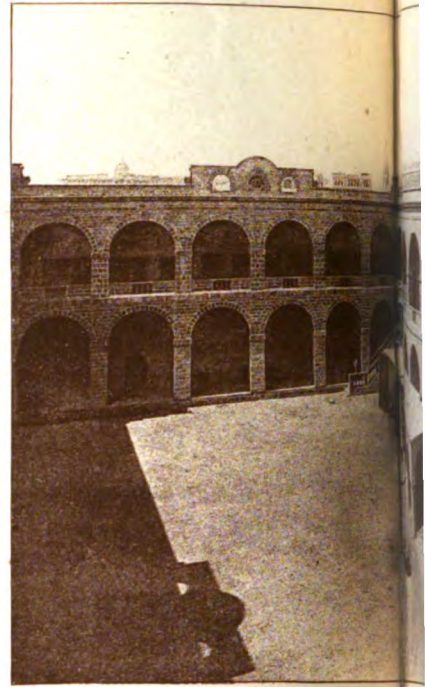
WAREHOUSE DETAIL.

RALLI BROTHERS' WAREHOUSE, KARACHI, INDIA.

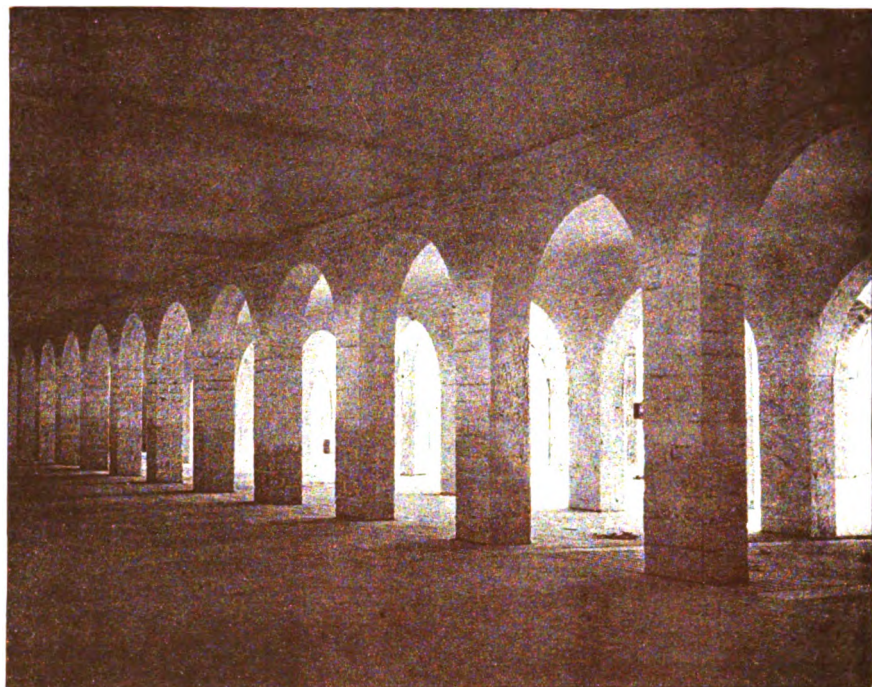
E. B. HOARE (HOARE & WHEELER), ARCHITECT.



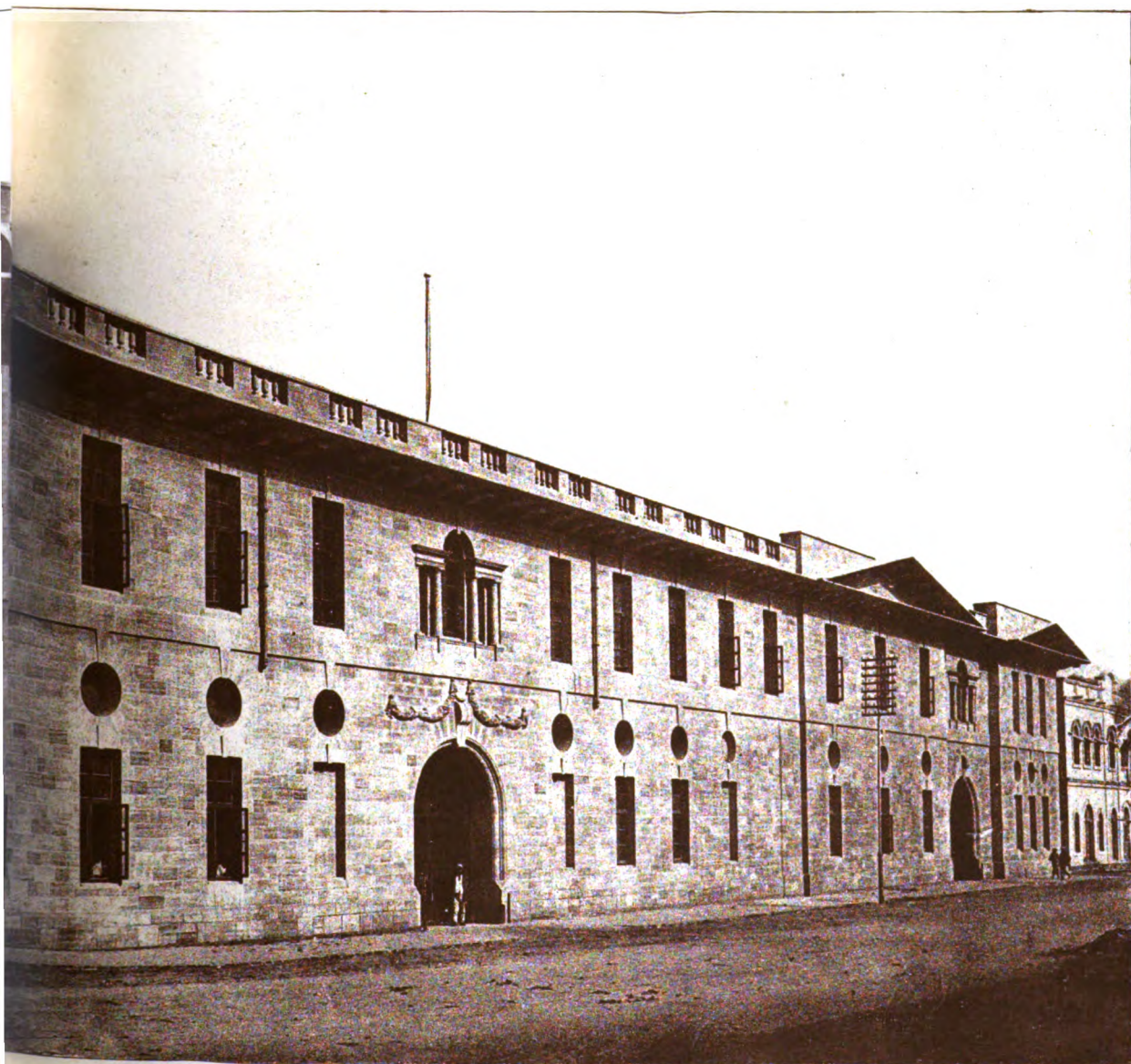
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AUGUST 18th, 1922.



WAREHOUSE.



"INK-PHOTO" SPRAGUE-HAYCOCK (PRINTERS) LTD. 69 & 70, DEAN STREET, LONDON, W.1.

with either two or three eastern chapels, and a long nave with aisles. Cistercian churches were not affected by the need to provide parochial services. At Fountains the monks' choir extended up to and included the first of the eleven bays of the nave. The second bay was filled by the *pulpitum*, with central doorway in the screens and two flanking altars. The third bay contained the chapels enclosing these altars, with a passage between them. The fourth bay formed the retro-quire, where aged and infirm monks attended service. Behind it and between the fourth pair of pillars stood the rood-screen with central altar and two doorways; and an altar flanking it under the arch on each side. The remaining six bays were occupied in the usual Cistercian manner by the stalls of the conversi, or lay brothers, who had a night stair from their dorter. At the west-end was a gallery for the greater organs. A feature peculiar to Cistercian churches is the cutting off of the aisles from the central nave by stone screens built flush with the front of the pillars.

Fountains, austere as some of its early work is in comparison with the rich work which was being produced contemporaneously throughout Western Europe, is not so severe as some of the still earlier Cistercian abbeys abroad. Mr. Bilson, who was the spokesman, compared the reaction of St. Bernard against ornament, and even against art, to the attitude of mind of the early Methodists. But Fountains came late in the series, when the most rigorous reading of the rules was abating. They were thrown back on structural essentials, which are the fundamental of all true architecture. Construction was well thought out, and generally executed with great care. This simplicity of ornament is in great contrast to the general late Romanesque. Though this restraint weakened, their work remained always sober. Here at Fountains the abbey is a mixture of the architecture brought by the Normans to England from Normandy, which became modified as Anglo-Norman, and of Burgundian forms derived through the close intercourse with Cîteaux, the parent house. But in the little bits of detail, which are precisely like what may be seen in monasteries abroad, there is no trace of any influence from the Ile de France. The pointed arch was in common use in Burgundy at the time of the foundation of Fountains, and was not invented by the Cistercians. They adopted the big cylindrical nave-column of Anglo-Burgundy, and left the arches perfectly plain with a tumbler roll. The semicircular arches spanning the aisles to carry its barrel vault was a mannerism imported by the Cistercians into a good many of their churches from Sweden to Sicily.

Mr. Bilson, after giving a general description in the nave, moved to the site of the old high altar, where he dealt more particularly with the eastern portion of the church. In the larger Cistercian monasteries the number of altars became insufficient for the number of priests, despite the fact that the proportion of priests in the community would be quite small. But it is believed that there was a rule by which Mass could not be said more than once per day at each altar. At Clairvaux the present apsidal termination replaced a square end in order to accommodate chapels. At Pontigny they carried further the idea by putting chapels on both sides of the transepts, in that way finding space for no less than twenty-three altars. Then came the rectangular ambulatory with chapels opening off it. Clairvaux has an apsidal ambulatory with a ring of chapels—in all seventeen—each being not a distinct chapel, but simply a division of the great semicircle. Later the Cistercians divided the aisle bays into chapels. Here at Fountains, early in the thirteenth century, there was built behind the high altar a vast eastern transept two bays deep, and rising to the full height of the church, with nine chapels against its east wall and a processional path in the western bay. This unusual and magnificent conception was imitated with great splendour in the Benedictine church of Durham.

Fountains is unequalled in England as an example of the arrangements of a mediæval monastery. Archæology on the comparative method has become almost an exact science in so far as it applies to monastic ruins of this

sort. There is very little here above ground for which the use cannot be ascribed with absolute certainty. Mr. Bilson, and authorities like him, can only find room for difference of opinion concerning minor details. The Royal Archæological Institute, who were here reinforced by the Yorkshire Archæological Society, were able to give unusually prolonged attention to individual parts, from the abbot's lodging on the south-east to the wonderful late fifteenth-century tower on the north-east. Lunch was served in the famous vaulted cellarium of twenty-two bays (formerly partitioned by screens and forming the lower storey of the house of the lay brothers) on the west side of the cloister, which is considered to be the most remarkable building of its kind in existence. It was with very real reluctance that the party were shepherded once more into the motor-coaches for the return journey to Ripon and a mayoral garden-party.

In the evening the annual general meeting of the Institute was held at the Town Hall, the President, Sir Henry H. Howorth, K.C.I.E., D.C.L., F.R.S., F.S.A., in the chair. It was followed by a lecture on "The Mediæval Seals of Yorkshire," by Mr. C. H. Hunter Blair, M.A., F.S.A.

Tuesday, July 25.

On the outskirts of Ripon, close to the ford across the Ure, and not far from the railway station, lies the very modest St. Mary Magdalene Hospital, which is in danger of being overlooked by visitors and forgotten by the townspeople. It was founded by Archbishop Thurstan in the twelfth century. The houses attached to it were rebuilt some five centuries later, but this little chapel was left. Its principal contents are the pre-Reformation altar-stone, the Roman tessellated pavement of the chancel, the screen, which incorporate some sixteenth-century works, and an iron-bound hinged chest of the same century.

The motor-coaches were then boarded for a short run, the concluding portion of which was over farm roads to the delightful yeoman's dwelling known as

MARKENFIELD HALL.

Mr. Louis Ambler, in his "Old Halls and Manor Houses of Yorkshire," describes this building as "one of the best examples still remaining of a mediæval manor house built partly for defence." John de Markingfield obtained a licence to crenellate in 1310, and shortly afterwards erected the earliest part, which consists of an L-shaped three-storeyed building faced with dressed stone and containing a large kitchen, a vaulted buttery and pantry, and servants' offices on the ground floor, a large hall, measuring 42 feet 6 inches by 29 feet 6 inches, approached by an external stone staircase (now demolished) over the kitchen, with its solar and garde-robe at the eastern end. To the south of this solar is the chapel, 30 feet by 16 feet, and chaplain's room adjoining on the first floor and some bedrooms on the second floor, a stone turret staircase, 6 feet internal diameter, with a conical stone roof, giving access to all these upper chambers. The windows of the hall and chapel have traceried arched heads, most of the other windows having square heads inserted later. The outbuildings, stables and gatehouse were built in the sixteenth century of rubble stone, and with the older buildings and wing walls they surround a courtyard, the whole being encompassed by a moat, over which a stone bridge gives access to the gate. The main building has been partly modernised internally and is now occupied as a farmhouse.

The party were met by Mr. Sidney Kitson, F.S.A., F.R.I.B.A., who gave much interesting information concerning the place. There is a mention of it in Domesday as belonging with eleven others to an important landowner named Bernulf. The present building was "a one-man show"—and that man was Canon John of Markenfield, a clergyman who suffered many vicissitudes. It is refreshing to note how stoutly this parson built for his own occupation. It was the work of a man of the world, and without anything characteristically local about it.

The family rose from obscurity through this John, who held many ecclesiastical and other appointments of importance and profit. In 1310, when he received licence to

crenellate, he was Chancellor of the Exchequer. Two years previously he and an elder brother had been granted free warren in their demesne of Markenfield. By 1309 John had bought his brother's share. The house was finished by 1313. Then his troubles began. First came a little matter of maladministering a trust. Next he was accused of abducting a widow from York. John was indicted, but obtained the King's pardon in 1314 at a ruinous cost. He died in 1333, no doubt a broken and disappointed man. It is uncertain who succeeded him, but the family flourished for more than two centuries, until its extinction after the Rising of the North in 1569, when the estates were confiscated and granted to Lord Chancellor Egerton.

WEST TANFIELD CHURCH.

This is one of those buildings which arouse sympathy by reason of the mistaken zeal with which it has been cared for. The restorers of 1859 evidently considered that any survival older than the middle of the fourteenth century was an offence to the eye and an outrage to the conscience of the parishioners. So the fabric was "improved" accordingly. Happily the wonderful mediæval monuments and some stained glass were not included in the scheme. Nor was the curious little chamber, of the size of a sentry-box, which is built in the north-west corner of the chancel and is entered from the north aisle. Its purpose is still a matter for debate. The most likely theory is that it served as an anchorite's cell or anker-hold. All the monuments are in the north or Marmion aisle, including, "the glory of Tanfield Church," that of Sir John Marmion (obit 1387) and his wife. The alabaster figures lie on a fine detached altar-tomb, which still possesses its contemporary large wrought-iron hearse of light construction, having a standard at each corner bearing a four-leaved pricklet for taking candles.

Mr. I'Anson said that he had come to the conclusion that the earliest effigy commemorated Sir Robert Marmion I., the first of the Marmion lords of Tanfield, who died in 1266, and suggests that it was erected some fifteen years later by his widow, who founded a chantry chapel here in 1281. It is of peculiar interest as the only thirteenth or fourteenth century effigy in Yorkshire revealing very decided French influence; though the fact that the legs are crossed shows that it was not made in France, where this device to make the figure look graceful and to strengthen the effigy at its weakest point was never adopted.

Mr. I'Anson had some interesting things to say about effigies in this material. Alabaster, a sulphate of lime, is found in great quantities in the red marl of the upper Keuper beds of Derbyshire, Staffordshire, and Nottinghamshire, and also at Buttercrambe, between York and Malton. Local schools of alabastermen turned out hundreds of these figures for distribution throughout England and for export to the Continent. The earliest example he had met with was that of a cross-legged knight of c. 1310, at Hanbury, Staffordshire; next in date came the lovely effigy of Prince John of Eltham (1336), Westminster Abbey. But the overwhelming majority of these alabaster effigies were of post-Black Death period; and although admirable works in their way, they lacked the individuality of those of the pre-Black Death period. The question of portraiture in effigies was a very vexed one, as there was very little reliable evidence on the subject. But one met with such very striking individuality in the faces of the knights of the pre-Black Death era that he could not help thinking there had been in many instances a definite attempt at portraiture. It was, however, quite otherwise in the post-Black Death period down to about the time of Edward IV. The faces of the latter knights bear a striking family likeness, a mild, almost insipid type of face, and it is quite certain there was no such attempt. He felt convinced that the effigy of even so famous a person as the Black Prince was not a portrait. And yet even so late as that of Richard II. there seems to have been an occasional attempt.

Before leaving the church, Mr. I'Anson made an appeal for a more general detailed study of mediæval military effigies. Up to the present only those in one county in England have been scientifically dealt with. That notable

exception is Northamptonshire, where they have been most admirably dealt with by the late Mr. Hartshorn. These monuments form, in his opinion, one of the most fascinating branches of archaeological research. To students of armour and arms they are simply invaluable, for they depict mediæval military equipment with the most painstaking care and the most minute exactitude. Indeed, down to 1460 they form our main authority on armour. To the historian and genealogist they must be equally fascinating. Even if not a solitary example is an actual portrait, they seem to bring one into closer touch than any other objects could possibly do with the knights and barons of whom we read in the chronicles. And the artist could not fail to appreciate the extraordinary felicity with which the mediæval sculptor has adjusted the entire composition.

What ancient glass now remains at West Tanfield has been collected into the most easterly of the windows of the north aisle wall. It is partly of the fourteenth and partly of the fifteenth centuries, though in some degree made up with modern pieces.

A few yards from the church stands

MARMION TOWER.

The original home of the Marmions of Tanfield, a motte and bailey stronghold, was founded probably c. 1170, by Hugh Fitz-Gennegan, in the wood of Tanfield, and is known in mediæval documents as the Hermitage Castle. It passed later to the Marmions by marriage, and was probably converted into a stone fortress by the first Lord Marmion of Tanfield in 1314. There is nothing left of it now above ground. In 1348 the widow of the second lord erected a new house—probably of half-timber work—near the church, where she seems to have founded no less than three chantries. That, too, has disappeared. The Marmion Tower, an addition to this manor house, was built c. 1410 by the Fitzhughs, the successors of the Marmions. Considering that it has not been inhabited since 1570, this gatehouse is in excellent repair. It is almost square, measuring 33 feet 9 inches by 31 feet 3 inches, and consists of a basement and two upper floors, with a vice or well-stair in the north-west angle. There never has been a portcullis, the entrance being merely closed by wooden doors. Mr. I'Anson, in his account of the building, hazarded the conjecture that Lord Fitzhugh built this tower as a residence for himself whenever he might happen to visit this portion of his estates.

Tanfield is a favourite pilgrimage of lovers of Sir Walter Scott's "Marmion"; but no member of the family ever lived in the so-called Marmion Tower, nor were there any Marmions of Tanfield when Chester and Stanley charged the Scottish ranks at Flodden Field.

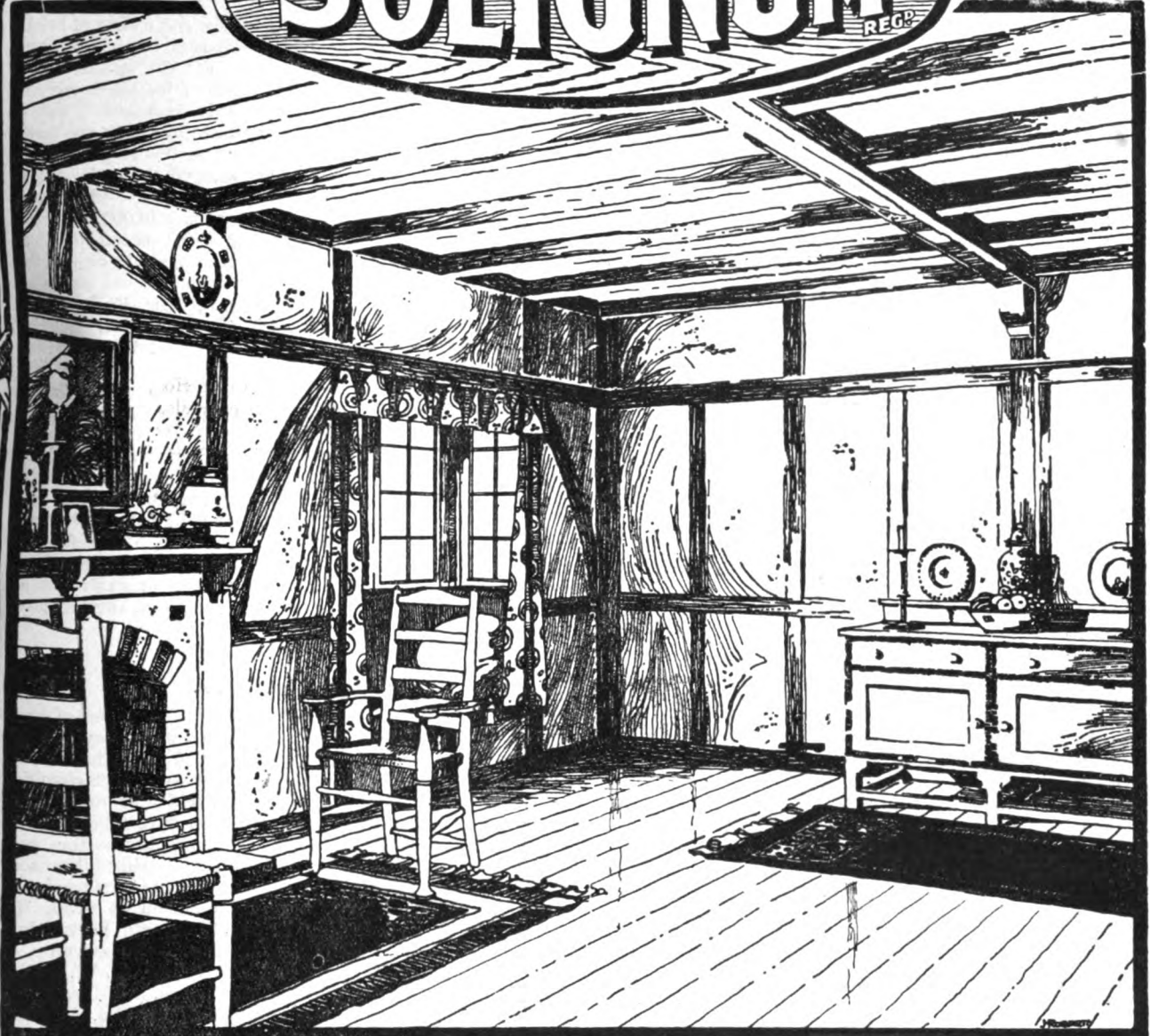
The final visit of the day was to

NOSTERFIELD CIRCLES.

These are also called the "Thornborough Circles," presumably because they are neither at Thornborough nor are they proper circles. These very remarkable earthworks are nearer Nosterfield. The three circles stand along a line of about a mile long running almost north and south, and considerably less than 200 feet above sea-level. The most perfect of the three is sheltered by a small wood; the other two lie on open land, and have been seriously cut up. There are the usual divergent views as to the purpose of them—such as Danish camps, sepulchral mounds, temples or racecourses. In type they are unusual, inasmuch as the ditch is inside and not outside the circle. This fact seems to negative the theory of defence.

The members concluded their week's visit to Ripon on July 26, when depleted numbers attended at the Ripon Museum, which was formerly the Thorpe Prebend House, and was presented to the city in 1914. An interesting account of the history of the building was given by Mr. John Whitham, who for many years was clerk to the Dean and Chapter of Ripon. The whole of the properties belonging to the Prebend of Thorpe are stated in an inquisition in 1609 to have been lately sold to George Dawson, gentleman, being then worth £60 per annum.

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Mr. Dawson erected the present house, and on the night of April 14, 1617, he entertained there King James I.

After spending a little time in inspecting the Museum exhibits, the party paid a visit to the Maison de Dieu almshouses, the Old Residence, the Old Grammar School, now used as the Cathedral Song School; the Deanery, Bishop Huby's Wall, the Residence, Priest Lane, the Liberty Prison, and Ailey Hill.

In the afternoon, in showery weather, a visit was paid to Rievaulx Abbey, where the Office of Works are carrying out important work under the direction of Mr. C. R. Peers, F.S.A.

Fifty Years Ago.

AUGUST 17, 1872.

THE BEDFORD CHARITY ESTATE.

The houses in the neighbourhood of Harpur Street, Theobald's Road, East Street, and New North Street, close to Bedford Row, which belong to the Trustees of the Bedford Charity, are said to be in such an unhealthy condition in consequence of certain nuisances existing in their midst that steps are being taken to bring the matter before the police and the Sanitary Commissioners. The site on which these houses stand forms an unequal square. There are upwards of forty tenements, averaging fourteen rooms to a house, with several families living in a house, the total number of inhabitants who are said to be immediately affected by a nuisance complained of amounting to about 500. The space inside this square of houses is occupied by a refiner's furnace and a steam saw-mill, and it will be remembered that about twelve months since the whole of that interior space was burnt, and the fire also injured many of the adjoining houses, and inflicted loss upon several families. It appears that before the fire there were two tall chimneys on the property, close together, connected with the refiner's furnace and the saw-mill, both of which, it is alleged, had been for years a nuisance to the neighbourhood. When they were rebuilt the two chimneys were incorporated into one shaft, and it was expected that under this arrangement the nuisance would be abated. It now appears, however, that this is not so. The new chimney is 25 feet lower than either of its predecessors, and the complaint is that, as a consequence of this curtailment in height, volumes of smoke, denser than ever, enter the houses, and the odour of the smoke is rendered still more pernicious by a system of burning old paint scrapings to get up the steam; and it is alleged that by this process the stench is so abominable that it not only produces nauseous headaches and disease amongst the inhabitants, but that the deterioration of clothing, furniture, and every article exposed to its influence is serious. This nuisance is said to last from about six o'clock in the morning until about five or six at night, and is intensified by the refinery establishment, where the burning of rags and grease is constantly going forward, and which, it appears, is almost unbearable. The nuisance has now arrived at such a point that the inhabitants complain they cannot longer reside in the neighbourhood unless it is abated, and a representation is, in the first instance, about to be made to the Bedford Charity Trustees, who are the owners of the property, and, failing, the Sanitary Commissioners will be called upon to interfere.

Eastwoods, Ltd.

The second annual general meeting of Eastwoods, Ltd., was held at Winchester House, Old Broad Street, E.C., Dr. T. Cato Worsfold, M.A., J.P., M.P. (chairman of the company), presiding.

The report, made up to March 31, 1922, showed a profit of £25,294 15s. 5d., after providing adequately for depreciation and writing off £5,000 from preliminary expenses and underwriting commission. On the recommendation of the directors a dividend was declared of 6 per cent. for the year, less income tax, leaving a balance of £27,401 15s. 0d. to be carried forward to the next account. Having regard to the unforeseen length of the coal strike, and its disastrous effect upon all the key industries, and particularly the building trade, the directors very justifiably claim that the result of the year's trading must be considered satisfactory.

Dr. Cato Worsfold, in the course of his address, mentioned some of the other recent difficulties which have beset brick manufacturers. One serious one was the announcement by the Government of their intention to cancel their contracts. Fortunately wiser counsels prevailed and ultimately an arrangement was come to in the trade whereby the Government were able to deal with their contracts without detriment to those with whom they had entered into these arrangements. The liquida-

tion of the Government's outstanding contracts is proceeding on quite satisfactory lines to all concerned. Another thing that contributed to depreciate trade for the time being was the reduction in the number of houses to be built under the Government scheme. On this subject the chairman, who is also a member of the House of Commons, spoke as follows:—"Believe me that this in the end was the wisest course to adopt, and the sooner the adventitious aid of Acts of Parliament is removed, and the demand and supply in respect of a great industry such as the building trade is allowed to resume its normal condition, the better it is for those who supply the bricks, those who build houses with them, and those who have to pay rent for those houses."

Since last year the prices of all qualities and makes of bricks, as well as of the various building materials in which Eastwoods deal, have fallen considerably, but this will stimulate the business. Dr. Worsfold expressed the opinion that the figures now obtaining for all that they dealt in will be maintained, and, in any event, the prices at which their stocks appear in the books left the directors free from any anxiety in this respect at the present time. The company have secured the order for all the stock bricks required in connection with the Golders Green to Hendon railway, which will amount to about 10,000,000 bricks altogether. This is by far the largest order placed for stock bricks for many years. In the past Eastwoods have supplied many large contracts—including the British Museum extension, L.C.C. schools at Battersea, Greenwich, Mile End, Poplar, Camberwell, Southfields, Shoreditch, Mitcham, etc., Waterloo Station extension, Colchester New Asylum, Midland Railway (Tottenham and Forest Gate), Well Hall housing, Stonebridge Park power station, L.C.C. fire stations, Miller Hospital, Greenwich, Strand Palace Hotel, etc., etc. They have also recently secured the order for the bricks required for the Dover housing scheme, and have recently reopened their works at Halstow and Shorebury-ness and also at Yaxley, this latter especially to meet the increasing demand for Fletton bricks. Advantage, moreover, has been taken of the quietness in the industry to get all their plant and machinery in the best of order and condition. Therefore the company are in a strong position to take full advantage of any trade improvement. Eastwoods have been in existence for 107 years, but never before have they commanded the resources that they do to-day.

Competition News.

The Ipswich War Memorial Committee, in the course of their "Conditions of Competitions," stated that, while they did not desire to influence competitors in their designs, they would suggest "the Memorial should be a restrained and dignified architectural composition, of such a character as to fittingly record the names of some 1,400 men who have fallen." The cost was to be £5,000. Over 400 applications for particulars were received, and 180 designs were actually submitted. Mr. Henry Ashley, F.R.I.B.A., the assessor, has now made his award as follows: First place, with premium of £150, Mr. Edward Adams, of 9 Herbert Street, Whitworth Park, Moss Side, Manchester (No. 154); second place, with premium of £75, Mr. C. H. N. Roberts, 61 South Molton Street, W.1. (No. 20); third place, with premium of £50, Messrs. J. C. Prestwich & Sons, Bradshawgate Chambers, Leigh, Lancs. (No. 1). Recommended for honourable mention: Mr. R. C. Arnold, 238 Thorold Road, Ilford (No. 67); Mr. W. G. Phillips, 234 Barcombe Avenue, Streatham Hill (No. 105); Mr. Wm. Bevan, Tavistock Road, Croydon (No. 122); Messrs. Lacey & Upcher, Tombland, Norwich (No. 138). The winning design is in the form of a cenotaph set on a raised surround backed by a screen wall bearing the name tablets. At the base of the cenotaph facing the main approach is a bronze trophy of arms, etc., encircled by flags and cords symbolising the putting away of the impediments of war.

The "Daily Mail" are offering £500 in prizes for designs for labour-saving bungalows in connection with the Ideal Home Exhibition, to be held in March next. The total floor area of the bungalow, which has to include a specified number of rooms, must not exceed 1,500 square feet, including walls. The area of the rooms, with the exception of the kitchen, is left to the competitor. The prize money will be divided up as follows: £300, £125, £75. Mr. E. Guy Dawber, F.S.A., F.R.I.B.A., and Professor A. E. Richardson, F.R.I.B.A., have consented to act as assessors. The last date for receiving entries for the competition will be November 1. Any inquiries on the competition must be addressed to the Secretary, Ideal Bungalow Competition, The "Daily Mail," 130 Fleet Street, London, E.C.4, on or before September 14. Questions will not be answered individually, but will be printed with answers and circulated to all competitors who apply for them.



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General

Mr. Walter James Burrows, F.R.I.B.A., died on the 10th inst. after a long illness, aged sixty-one.

Wolverhampton Town Council have appointed a special committee to consider whether a public hall should be erected out of the rates.

The Liverpool Education Authority have given notice of their intention to provide a new public elementary school for about 400 children at Whitehedge Road, Garston.

Messrs. Boreham & Gladding, architects and surveyors, have moved their offices from 119 Moorgate to 1 Museum Street, London, W.C.1. Their telephone number is Gerrard 3281.

Messrs. Joseph Potts & Son, architects and surveyors, Newcastle and Sunderland, have prepared a scheme for the restoration of St. John's Church, Newcastle-on-Tyne, at a cost of £5,000.

Mr. G. C. Lawrence (President of the Bristol Society of Architects) will act as representative of the Royal Institute of British Architects on the Court of Governors of the University College of the South West of England.

Dunfermline Dean of Guild Court last week approved of plans presented by the Scottish National Housing Company (Ltd.), for the erection of 40 additional dwelling houses of five apartments each at Rosyth Garden City.

Mr. A. J. Taylor, architect, Bath, has been invited by the Malvern Urban District Council to prepare plans for public baths to be erected at a cost of about £10,000. It was originally proposed to obtain designs in open competition.

The Timber Disposal Department, Board of Trade, was transferred from 49 Wellington Street, Strand, W.C.2, to the Board of Trade Offices, First Floor, Great George Street, S.W.1, on Monday, August 14. Telephone address: Victoria 3840; Telegraphic address: "Timdissect Parl, London."

Messrs. Colbourne and Gates, of Paignton, Devon, are the architects for a house about to be erected in Orient Road, Preston. The tender of Mr. W. H. Webber, of Paignton, amounting to £970, has been provisionally accepted. Mr. G. S. Harris, of Paignton and Torquay, prepared the quantities.

At Rothsay Dean of Guild Court recently plans were passed for a new church, which is the gift of the Marquis of Bute to the Catholics of the district. The new edifice will be a handsome building in the Norman style of architecture, and the estimated cost is between £30,000 and £40,000. The erection of the church will occupy about two years.

A plan of the probable lay-out of the proposed Aberdeen Joint Hospital on the Burnside-Foresterhill site of about 111 acres has been placed for exhibition in the Aberdeen Town Hall. It has been prepared under the supervision of Colonel D. J. Mackintosh, C.B., M.V.O., superintendent Western Infirmary, Glasgow, and Mr. William Kelly, A.R.S.A., LL.D., Aberdeen.

The North Eastern Railway Co. have had under consideration the erection of deep water docks at the mouth of the river Tees to alleviate the congestion. The railway company have now decided to erect docks at a cost of about £4,000,000, which will, it is expected, take about ten years to complete. It is expected that the Government may offer financial aid to enable work to proceed at once.

Mr. George Oakley Totten has been appointed representative of the American Institute of Architects to the International Congress of Architects to be held at Brussels in September. Mr. Totten will carry with him an invitation from the American Institute of Architects for the eleventh International Congress of Architects to be held at Washington in 1926, to which representatives of all nations are invited.

Tenders for the builders' and ferro-concrete work in the Hull Corporation Electricity Works extension were sent in by nine firms, and varied from £7,908 15s. 11d. to £12,524. The Electricity Committee accepted the lowest tender, which was sent in by Messrs. A. J. Darneley & Son, Ltd., Hull. Later the firm withdrew, and the committee decided to accept the next lowest tender, that of Mr. J. T. Levitt (£8,644), who told the City Engineer that he was prepared to carry out the contract.

After much discussion as to the site and form of the war memorial for the burgh of Airdrie, it has been decided to proceed with the erection at the west end of the burgh of a cenotaph, designed by Mr. J. Maurice Arthur, F.R.I.B.A., C.M.G., D.S.O., and selected by Sir John Burnet, A.R.A., in a limited competition. The whole monument will be constructed in white Creetown granite by Messrs. Scott and Rae, Glasgow. The foundations are being prepared, and the opening ceremony is fixed for Armistice Day, November 11.

Seventeen tenders were received for proposed alterations and additions to the Public Baths situate in High Street, for the Walthamstow Urban District Council. Mr. J. Williams Dunford, 8 Cleveland Park Avenue, Walthamstow, is the architect. The quantities were by Mr. E. C. Harris, 39 Bloomsbury Square,

W.C. The acceptance of the lowest tender, amounting to £11,750, which was submitted by Messrs. Thomas Shillitoe, Seven Sisters Road, N., has been deferred pending settlement of question relative to engineering craft demarcation.

A novel cargo was discharged on Saturday on Sanwich Quay, Bristol. It comprised tons of "crazy paving," or ornamental stone used for decorating private flower gardens and lawns. The material was conveyed to this country from Cherbourg. Hitherto this particular stone has been obtained from Yorkshire and Somerset, but owing to the fall in value of the franc, it is now being shipped to this country from Continental ports.

Major Barnes, member for East Newcastle, having asked the Minister of Health, in the Commons, if he would state the total number of houses required to replace other houses which, although they cannot at present be regarded as unfit for human habitation, fall definitely below a reasonable standard as given by the local authorities under section 11 (E) of the form of survey under the Housing Town Planning Act, 1919, Sir Alfred Mond, in a written reply, said the total number of houses estimated by local authorities as being required under the section of survey referred to was 104,442.

The Windlesham Urban District Council have been considering the matter of the main drainage and sewage disposal of the most thickly inhabited parts of their district, including Bagshot, Lightwater and Windlesham, and had prepared a scheme for the drainage of these areas, and at a recent meeting of the Council it was decided to make formal application to the Unemployment Grants Committee for a grant-in-aid to carry out the work. The engineer, Major T. J. Moss-Flower, of Westminster and Bristol, was instructed to supply the necessary data to accompany the application.

The authorities of University College Hospital, London, W., have received the following tenders in connection with their reconstruction scheme. These first contracts are for the erection of (1) Nurses' Home, (2) additions to Medical School, (3) Residents' Quarters, (4) Obstetric Hospital, and (5) Tunnel. Mr. Paul Waterhouse, P.R.I.B.A., and Mr. George Hornblower, F.R.I.B.A., are the joint architects. The quantities for (1) and (2) were by Mr. W. Thornicraft, and for (3), (4) and (5) by Messrs. Kennett, Baker and Mallett.

| | For (1) & (2) £ | For (3). (4) & (5) £ |
|---|-----------------------|----------------------------|
| Walter Lawrence & Son, Ltd. | 154,279 | 133,286 |
| J. Carmichael, Ltd. | 157,814 | 134,000 |
| F. & H. J. Higgs, Ltd. | 161,029 | 136,214 |
| Hall, Beddall & Co. | 160,830 | 137,050 |
| Holland & Hannen & Cubitts | 160,939 | 137,346 |
| Perry & Co. (Bow), Ltd. | 162,232 | 137,444 |
| Trollope & Colls | 162,558 | 138,709 |
| Prestige & Co., Ltd. | 164,930 | 139,850 |
| Sir Robert McAlpine & Sons | 166,879 | 138,015 |
| Holloway Bros., Ltd. | 171,340 | 135,277 |
| F. D. Huntingdon, Ltd. | 169,804 | 136,826 |
| Higgs & Hill | 169,100 | 140,535 |
| Dove Bros. | 170,094 | 143,544 |
| J. W. Falkner & Sons | 175,338 | 142,517 |
| Holliday & Greenwood, Ltd. | 173,129 | 145,374 |
| Mattock & Parsons | 183,600 | 151,815 |
| The tender of Messrs. Walter Lawrence & Son, Ltd., giving a total of £287,565, has been accepted, subject to modifications. | | |

Trade Notes.

Messrs. Sankey & Sheldon, Ltd. (Sankey-Sheldon Department), of 46 Cannon Street, E.C., inform us that they supplied a considerable amount of steel furniture and fittings for the new offices of the Australian Mutual Provident Society in King William Street, E.C., which we illustrated last week. Their contract included lockers for staff clothing, stationery cupboards, a number of trolley cabinets, adjustable strong room shelving as well as filing cabinets, and sundry other fittings of steel such as private wardrobes and metal wastepaper baskets.

Owing to the steady development of the businesses of the Patent Rapid Scaffold Tie Co., Ltd., the owners of the well-known "Scaffixer" scaffold tie, and of the Tubular Scaffolding Co., Ltd., whose patent tubular scaffolding has been extensively used by H.M. Office of Works and other Government Departments, as well as on many important buildings in London and elsewhere, it has been found desirable to amalgamate them in a new company, Scaffolding (Great Britain), Ltd. A department has been added to the company's operations for the supply of suspended scaffoldings, a form of scaffolding very largely used in America, and which is at present in use in Great Britain on the new Bush Building, Aldwych, W.C. Their telephone number is Brixton 330.

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The Fetish.

ALL ages and times have what we may call their fetishes, which in literature and journalism take the form of words distorted from their original meaning and redundantly used and of tricks of expression. To use an illustration, we can hardly open a modern novel without finding some character in it is "intrigued," and it would hardly be possible to take up a newspaper without finding the word "pact" used somewhere. Why a character should not be "interested" or "absorbed" instead of "intrigued" it would be hard to say, and why the simple expression "treaty" should be abandoned for "pact" we do not know, but these and other expressions have the charm of a fetish to many writers. We rejoice in "conversations" instead of "discussions," and we are all fond of the "psychological moment" instead of the "opportune moment," probably because it indicates greater insight into the unknown. And in architecture—especially among the younger men—the fetish is supreme, that fetish mostly taking the form of the carefully detailed order which it is the desire of every student to introduce into the simplest design. If this cannot be done, the next best thing is to indicate a design of such marked want of interest and severity that we can judge the designer's work is a lover's lament for the absence of his mistress—the Classic order. No longer does the student pass pleasant hours in studying the smaller and slighter examples of the traditional detail which pleased us in the closing decades of last century, for these trivialities have been displaced by the worship of the present fetish—the immaculate order, preferably of a Greek variety. We have gained and lost in our passage—for we hope it is but a passage—through a sterilising tract of architectural endeavour. Contemporary planning is undoubtedly an advance on that of the past, and our students have learned how to balance and compose groups of buildings as we might learn to express our thought in clear and logical sequence. What we have lost in our fetish worship is the broad and liberal sympathy which gave grace to much of the best work of the end of last century, the unaffected enjoyment of form and detail, the results of a joyous imagination sometimes revelling in too unrestrained a manner in the great treasure house of past design. To instance two examples of what we mean, one of a student's work and the other of a practising architect, we may mention the delightful design which secured the Soane Medallion for Mr. Prentice, and which took the form of a great country house, every part of the design of which showed delight in picturesque and playful form. Our other example is the Institute of Chartered Accountants, too free and playful perhaps for purists, but how much fuller of life and vigour than most of the work which is being done to-day! We might mention Brydon's work at Bath and Chelsea, virile and perhaps to some in these later days a trifle coarse, but full of vigour and imagination as the Georgian work of which it is the legitimate outcome, and compare it with the combed-down and devitalised design we see around us. Our students seem to us

too often to be patiently starving themselves in the attempt to induce visions which do not come and inspiration which escapes their jaded endeavours. We are forgetting the most vigorous growths of the great Renaissance movement in our close and microscopic study of the dull and correct work which brought a mighty chapter of architectural history to a close. We have grown fonder of the work of the pedants than of that of the giants, and forget that the great originators of a style who had the ruins of the Roman Empire before their eyes produced buildings which were as daring in their originality and freedom of form as those of their mediæval ancestors. That Renaissance rather than the older Classic should be the subject of our studies, and should give us a wider range of sympathy than those which now sway us.

Our contention is that we have gained in technique and have the great advantage that a large proportion of men entering the profession have now gone through a careful and systematic course of training. This renders their work more scholarly and less open to criticism from the academic standpoint. If we compare it with the work of a few decades ago, when the student picked up his knowledge more casually, it is natural that we should discover glaring faults in the last. The real criterion is to try to imagine what better trained men would be able to do if they freed themselves from the shackles which now weigh them down and render them incapable of seeing things as they are and taking genuine enjoyment in them.

We have been looking at some of the work produced by our schools of design and examining that done for the Rome Scholarship, and cannot help asking whether we can reasonably hope to attain our object of interesting the general public in architecture along the road we have chosen for ourselves. Can we even really interest ourselves by this machine-made plethora of correct platitudes which passes for the last words of the schools? A contemporary publishes some illustrations of the very curious housing work being done in Amsterdam. It is crude, bizarre, and strange to us, but it has at least the touch of life and fancy.

We should not like to see our architects follow along the path indicated, but there may be reasonable grounds for holding, as we do, that there may be a mean between two extremes which would be preferable to either, a mean direction which we should try to recover and one which we were nearer to in the past than we are now. May we not take it that our students may have learnt much that will be useful to them, but that at the same time their "orientation" has been wrong, and that it is open to them to find a way in which they will advance their own interests and that of the profession they belong to better than they are now doing? We are convinced that though we may be with the minority to-day, that minority will become the majority of to-morrow, and that when it does we shall be a little nearer the day when architecture may again evoke a greater amount of public interest than it does now.

Our Illustrations.

LENHAM COURT, MAIDSTONE, KENT. WALTER CAVE, Architect.

LOUVRE DE PARIS, OXFORD CIRCUS, LONDON, W. MESSRS. MEWES & DAVIS, Architects.

The external façade is from designs by Messrs. Henry Tanner, architects, approved by the Commissioners of H.M. Office of Works. F. D. Huntington, Ltd., of 11 Hanover Square, W., were the general contractors. All casements were by the British Luxfer Prism Synd., Ltd., 16 Hill Street, Finsbury, E.C.2. Messrs. P. Turpin, 17 Berners Street, W., executed all the decorative plaster, paint and distemper work, and also supplied the general ironmongery, including door and window furniture.

Constructional steelwork was by Messrs. Drew-Bear, Perks & Co., Ltd., 110 Cannon Street, E.C.4.

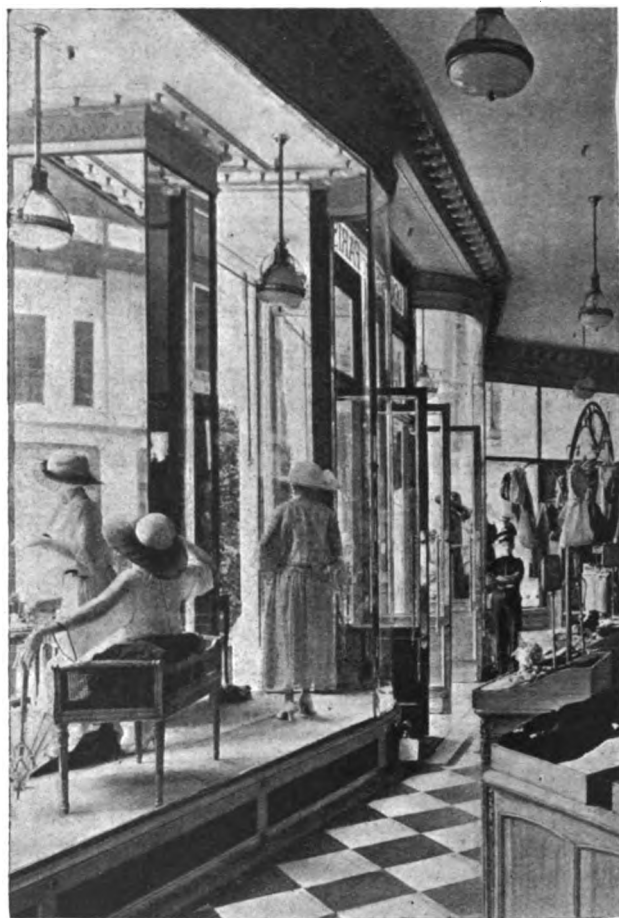
Floor coverings (shown in our text illustrations) were supplied by the Leyland and Birmingham Rubber Co., Ltd., 24 Duke Street, Aldgate.

Shop shutters, motors to same, and gearing for shutters, also internal fireproof doors, were supplied and fitted by the Art Metal Equipment Co., Ltd., 186 Shaftesbury Avenue, W.C.2.

The lifts were by Waygood-Otis, Ltd. Fire escapes, pavement lights, etc., by Messrs. Haywards, Ltd., Union Street, Borough, S.E.1. Fireproof construction flooring, etc., Diespeker & Co., Ltd. Granolithic floors, Stuart's Granolithic Co., Ltd. Heating, ventilation and hot water supply, as also cooking and kitchen appliances, Richard Crittall and Co., Ltd. Stair balustrades, Crittall, Freeman Bronze, Ltd., 246 High Holborn, W.C. Portland stone, the Bath and Portland Stone Firms, Ltd. Sanitary fittings, Shanks & Co., Ltd. Stone carving, W. Aumonier & Son, 84 Charlotte Street, W.1. Lavatories, the Art Pavements and Decorations, Ltd., 130 St. Paul's Road, Camden Town, N.W.1. Lightning conductor, W. J. Furze & Co., 9 Carteret Street, S.W.1. Asphalte, the Limmer and Trinidad Lake Asphalte Co., Ltd. The very effective green Westmoreland slates in the roof are by Roberts, Adlard & Co., Bermondsey, S.E.1.



GROUND FLOOR SHOWROOM.



GROUND FLOOR LOOKING THROUGH SHOW WINDOWS.

Notes and Comments.

Victorian War Memorial.

A war memorial is proposed for Victoria, Australia, which is to cost £250,000, payment for the winner being fixed at £6,250, and for the next five in order of merit £1,000 each. As the architects of Victoria realise that the sum offered represents $2\frac{1}{2}$ per cent. instead of 6 per cent. on the outlay, they have refused to compete, but are somewhat humorously told by the Lord Mayor that they should be content with the fee offered on account of "the patriotic nature of the memorial." In the first place, we do not see that an architect in consenting to work for less than half his fees is really helping his country; in the second, there seems no sufficient reason why the patriotism shown in self-sacrifice should be at the expense of the architect rather than that of the Lord Mayor and his committee. Possibly later mails from Australia may bring an explanation of

these interesting points. At present we sympathise with our colleagues in their determination.

Enfield Manor.

The ancient building at Enfield known as the Palace, or Manor House, with its remains of Tudor domestic architecture and its historic associations, is in danger of being pulled down to provide a site for a picture theatre.

The Palace stands in the old market place of Enfield. The Manor of Enfield was the property of the Crown in Tudor times, and it was there that Edward VI. heard of the death of Henry VIII. and his own accession to the throne. He subsequently settled the manor on his sister Elizabeth, and about the year 1552 had the Palace built for her.

The Palace was used for many years as a school, being first turned to this purpose by Dr. Robert Uvedale, Master of the Grammar School, about the middle of the seven-

teenth century. The greater part of the Palace has disappeared, but the central portion remains almost unscathed after nearly four centuries. In the principal oak-panelled room there is a stone chimneypiece bearing the arms of England and France quartered, with the Tudor rose and portcullis and the royal initials. This room also has a plaster ceiling ornamented with roses and fleurs-de-lis.

When the building and land were offered for sale by auction four years ago they were purchased by a local family in the hope of preserving them for posterity. The price then paid was £7,000, a sum considerably less than the present market value of the site and the chimneypiece and panelling. The building is at present rented by a Constitutional club under a lease which has yet nearly four years to run, at only £80 per annum.

The owners now find it impossible to retain possession of it. They have offered the building both to the Urban District Council and to the present leaseholders at the price it cost them, subject to the condition that it is not to be altered or pulled down, but in each case the offer was declined. It seems likely that they will be compelled to sell it without restriction in the open market, which would be a great pity, but has been the fate of many fine buildings that in process of time have become "out of place."

A Useful Book.

The U.P.C. Book Company, Ltd., of 243 West 39th Street, New York, have published a Students' Edition of the Georgian Period, which is a selection from the plates of the larger work which is familiar to us. The present work, which forms a collection of 100 plates with a well-written introduction, gives a useful summary of the work of the Colonial period, and is published at the reasonable price of \$4.

The Colonial work of America is in many cases very suggestive to us, as the conditions under which it was carried out usually led to the sparing use of delicate detail, which renders it specially applicable to present-day requirements, when the cost of building precludes the use of elaborate detail. Colonial work is also instructive as an example of the manner in which originality may be introduced in the use of a defined style. We cannot say that any of its detail is not Georgian in its character, but it is differently combined to that of our own buildings, and for that reason produces a different impression. Its delicacy and freshness have probably never been equalled in the work of any other country or period.

Government Housing Again?

According to the "Newcastle Chronicle and North Mail," the Government have an entirely new housing scheme in preparation, and many surplus housing sites are likely to be utilised in the near future. If this is true, it is unfortunate for the building trade and for all those who require houses, for the following reasons. The chief cause of the fall in the price of building is the jettisoning of Dr. Addison's scheme, and the only chance of bringing the private speculator into a market which he used to supply is for Government housing schemes to be absolutely abandoned and a policy of non-interference adopted. A new Government scheme would synchronise with an immediate advance in building prices, and the bigger the scheme proposed the greater the advance would be. On the other hand, the combing down of the departments and the abolition of many of them would save money which is now spent in super-taxation and which is not available for industry, which means increased unemployment to many. These facts should be patent to all, and are, we believe, clearly understood by many, including a certain section of the working classes themselves. We cannot do more useful work than in curtailing officialism and trying to simplify the functions of the machine which has become an incubus to all of us. Sir Alfred Mond should reflect on the fate of Dr. Addison, for the basket of the guillotine will hold more than one head; and if he follows in the footsteps of his predecessor, the same fate will await him, and even Sir Charles Ruthen's talents will not avail to save his chief.

Another "Daily Mail" Competition.

Former "Daily Mail" competitions for labour-saving houses have produced little which the profession did not know without them. They have given an immense amount of work to younger architects, but as far as we know have not resulted in making any one famous or in materially serving the public. They have possibly served to give additional publicity to the "Daily Mail," which is their business and not ours. A competition for a labour-saving bungalow is now announced, and it is stated that over 1,000 architects have already applied for conditions. Three premiums are offered—£300, £125 and £75—with the added inducement that a bungalow from the winning design may be erected at Olympia in March, 1923, for which the architect will be paid the usual fees. The bungalow is to have a total floor area of 1,500 feet and to be suitable for the country or the suburbs of a large town—why not of the neighbourhood of a small town is not stated. Mr. Dawber and Professor Richardson are to act as assessors, and designs are to be submitted on or before November 1, 1922. The design is to contain dining and drawing rooms, kitchen, and four bedrooms. We should much like to have an account from the winners of former "Daily Mail" competitions as to the advantage which has accrued to them from their success, and we should then be in a better position to judge whether it really pays some hundreds of men to struggle to gain the distinction of success. We should also like a well-written and concise article which would give an analysis of the advantages in architectural knowledge which have accrued from these recurring competitions. According to the opinions of some of the "experts" who write for the daily papers on building prices, such a bungalow should be a very cheap thing!

St. Paul's and that £100,000.

The Dean and Chapter of St. Paul's are advised by the expert commission appointed that a sum of not less than £100,000 should be spent within the next few years to carry out essential work for the preservation of the Cathedral. The interim report is signed by Sir Aston Webb, G. W. Humphreys, Mervyn Macartney, Basil Mott, and E. C. Trench, so it may be taken as the joint consensus of competent architectural and engineering opinion. The foundations appear from examination to be in a fairly satisfactory condition, providing that no further building operations are carried out below the level of the foundations in their vicinity. Considerable settlement has taken place in the piers and arches, some of which occurred during construction, but the bulk of the work to be done immediately is that connected with the replacing of defective stonework in the piers and arches. As for the money which is now required, as we have before said, there is a ready means of providing it, without an appeal to the public, in the sale of one or two of the churches and sites scheduled in the recent report. The public has every right to expect the Church to utilise the resources at its disposal before appealing to the public, which has other and urgent claims to deal with, both for public and private ends. Our views on this question have been clearly expressed and formulated, and we believe our conclusions are unavoidable to those who will examine facts instead of allowing themselves to be governed by prejudice.

Sir Thomas Brock, K.C.B., R.S.A., R.A.

We greatly regret to have to announce the death of Sir Thomas Brock, which occurred last Tuesday. Sir Thomas, who was 75 years old, had a long and successful career as a sculptor, distinguished for his refined and scholarly work, and greatly beloved by all who knew him for his kindness and courtesy to all. He was associated with Sir Aston Webb in the design of the Victoria Memorial, his greatest public work, but he carried out an immense number of private commissions, among them busts of Longfellow, Leighton, Lord Lister, Edwin Abbey, and Queen Victoria and King Edward VII. He was made a K.C.B. in 1911, was a member of the Royal Scottish Academy and an Honorary Associate of the R.I.B.A., while his reputation earned for him several foreign distinctions.

The World of Art.

(All rights reserved.)

The Exhibition of Wood-cuts and Engravings, lent by the British Museum to the Sunderland Art Gallery, where they are now on view, is of importance in itself, and still more so in marking what I consider a very interesting and valuable movement in relation to provincial art centres. This is, in fact, the second exhibition organised this year in the Sunderland Art Gallery by its present Director, Mr. J. A. Charlton, having been preceded in the earlier months of the year by one of the paintings of that well-known artist the Hon. John Collier.

The present exhibition commences with some fine Italian and German woodcuts of the fifteenth century; among the Italian the hunting scene of "Meleager and Atalanta," and among the German the "Adam and Eve" (1509) and the celebrated "Rhinoceros" by Albrecht Dürer, being especially worth noticing. Next in order on the screens we come to the chiaroscuro work of the sixteenth and later centuries, containing among the Dutchmen a fine rendering in this method of Rubens' "Flight into Egypt," and in English work of the eighteenth century J. B. Jackson's attractive treatment of a "Classical Landscape" after Marco Ricci.

Very noticeable among the line engravings lent here is the superbly drawn German engraving of a richly decorated crozier, with the figures of the Virgin and Child set within its oval. We come on the next screen to a delightful selection of Italian line engravings of the fifteenth century, which carry us forward from the charm of the earlier masters of this art in Italy, through Botticelli's famous illustrations, engraved from his drawings, of the "Divina Commedia," and again from Filippino Lippi's "Adoration of the Magi" up to Mantegna in his superbly forceful "Bacchanal," and Benedetto Montagna ("Orpheus") and Jacopo de' Barberi. Here, too, Albrecht Dürer is well represented in some of his most famous line engravings—notably the "Coat of Arms," with a cock with outspread wings perched on the helmet, a creation of this master unsurpassed in fineness of line, the "Vision of St. Eustace," "Knight and Death," "Melancolia," and "Smaller White Horse"; while near these Lucas Cranach, in his "Penitence of St. Chrysostom," shows that Saint in the background as quite a subsidiary figure to the charming group of a girl with a naked child.

I have said enough here to show that this exhibition is of work of a very high quality and interest, and I understand that it will be followed and completed in March and April of next year by an exhibition, on the same lines and from the same source, of etchings, mezzotints, drypoints, aquatints and lithographs, while an exhibition of Baxter prints is being planned for the months of October and November in this year. To complete my account of the present exhibition I ought to include the fine set of line engravings ("Adam and Eve," "The Almighty appearing before Noah," and "Lucretia Romana") by Marcantonio Raimondi, and the later French and English engravings of the seventeenth and eighteenth centuries—among these last being included Hogarth's well-known engravings of the "Enraged Musician" and "Marriage à la Mode," Woollett's plate of "Niobe" after Richard Wilson, and Sherwin's fine treatment of the "Fortune Teller" by Sir J. Reynolds.

I wish here especially to emphasise the value and importance of such loan collections in our great provincial centres as bringing art—and, wherever possible, the very best of art—within the reach of the people right through the country, and thus improving their taste and knowledge and stimulating their interest in art matters. Sunderland is evidently fortunate in possessing an energetic and able Director of her local gallery; but what one would like would be to see this example followed, not only in such great centres as Liverpool and Birmingham, where art matters are already in good hands, but in the lesser provincial towns, where, I believe, such loan exhibitions and displays of the work of individual artists of good standing would be

immensely appreciated. In the case of loan exhibitions such as the one just described, a short catalogue, with a clearly written introduction covering the subject generally, to be sold in the gallery for sixpence or a shilling (for there is not here, and should not be, any entrance fee to the exhibition itself), would be of the greatest educational value; for I feel certain that many visitors, who can appreciate and enjoy the engravings, have not the knowledge necessary to differentiate the various schools, or the time at their disposal to look them up in the standard works on this subject.

The death of Mr. Dudley Hardy, which was noticed in our last issue, has brought forward many characteristic stories of that well-known artist and illustrator, of whom it has been stated that at one time, when at the height of his popularity as an illustrator, he was earning as much as £5,000 a year. He was one of the contributors to that clever little comic weekly "Pick Me Up," and probably enjoyed these drawings as much as any he did, though without doubt many of his illustrations were intended for money-making. But Hardy was an artist of power, of feeling for colour and imagination, quite apart from the more popular side of his art as an illustrator. I have in the last twelve months had occasion to notice with admiration in these columns some of his recent watercolours in the London galleries; and his war pictures, which included "The Harvest of the Sea" and "The Tears of Christ," with the rain descending from heaven on the newly made graves, were paintings worthy of the terrible human tragedy which inspired their creation. S. B.

"The Architect" Fifty Years Ago.

AUGUST 24, 1872.

LEICESTER SQUARE AND THE CENTRAL RAILWAY COMPANY.

As there is some probability that the Central Railway Company, which some time ago obtained powers to construct a new street from Tottenham Court Road, through Leicester Square, to Charing Cross, may not carry out their powers, the Metropolitan Board of Works are contemplating some improvement in the Square. A resolution has been passed that it be referred to the engineer and solicitor to report when the powers of the company will cease, and what steps they have taken towards carrying out the scheme, in order that the Board shall, if they think proper, carry out the improvement independently of the railway company.

The Society of Architects.

Twenty-six, or about 75 per cent., of the provincial entrants submitted designs in the preliminary test for the second half-yearly Design Competition (1922), which closed on Tuesday, August 8, the subject being "A Memorial Tablet." The drawings were numbered as received, and the jury of assessors, Messrs. Percy B. Tubbs, L. Sylvester Sullivan, H. M. Robertson, and Thomas Wallis, after long and careful examination of the designs, selected the authors of the drawings marked 5, 8, 9, 10, 11, 17, 18, 20, and 24 to compete in Part II. of the competition. These were afterwards identified as follows:

Licentiate.—Arnold Taylor, of Bishop Auckland (11); Edward E. Bridge, of Liverpool (17).

Students.—J. C. H. Bawcutt, of Oxford (5); Leo. E. McMullen, of Manchester (8); K. F. Harris, of Linton, near Maidstone (9); H. G. Avery, of Leeds (10); V. C. L. Saunders, of Ventnor (18); P. E. Titley, of Warrington, Lancs (20); W. J. Werry, of London (23); H. C. Wilkinson, of Nelson, Lancs (24).

The final result of the competition, which is of the value of £40, will be published in the Journal in due course.

In the House of Commons recently Mr. Harmsworth informed Sir R. Newman (Co.U., Exeter)—who asked whether pressure could be put on those in charge of the Church of St. Sophia in Constantinople to prevent this unique building falling into decay—that from reports obtained by His Majesty's High Commissioner at Constantinople in April, 1921, it was clear that then the building, though not permanently secure, was in no immediate danger. The Turkish authorities appeared to be fully alive to the importance of preserving it. Inquiries would be made to ascertain whether it were the fact that the external nave was occupied by soldiers and used to store ammunition, but no immediate representations appeared to be called for.

Modern Methods in Building Construction.—XXX.

By Albert Lakeman, M.S.A., M.C.I.

CONCRETING—(continued).

A modern type of batch mixer which is somewhat different from the class of machine first introduced for superseding hand labour in mixing is the "Winget" chain-spade mixer, as this is not of the ordinary revolving drum type, but consists of a trough wherein the materials are mixed by revolving chain spades.

It was introduced in the first instance for dealing with materials that required to be mixed semi-wet only in order to produce suitable concrete for block-making, but its use is not limited to this class of work, as it can be applied to the mixing of wet concrete for general purposes. An example of its application to general work can be seen in fig. 160, where the concrete is being mixed and discharged directly into the excavation by means of chutes as previously described. In operation the aggregate and cement are fed into a fixed measuring hopper, and by the movement of a lever the contents of the hopper are discharged directly into the mixing trough, where they come into contact with the revolving chain spades for the actual mixing. The



Fig. 160. TIPPING WET CONCRETE FROM "WINGET" CHAIN-SPADE MIXER.

mixing operation is in sight of the operator at all times, and this is an advantage, as it makes control easy. Generally speaking, the machine should be economical in power, as the energy required to revolve the mixing spades is not so great as that necessary to revolve a large drum, and the flexibility of the chains should prove an advantage in the mixing action, in addition to reducing the wearing action on the spades. The batch mixed in one operation is comparatively small, as it is only 3 cubic feet, and the output is therefore too restricted for general work on a large scale. It is claimed that the cost of the machine will be saved in five weeks' continual operation, when compared with the cost of hand-mixed concrete, as 60 completely mixed batches can be produced in one hour, or 53 cubic yards in one working day of eight hours. The batch capacity can be increased to 4 cubic feet when wet concrete is being made, as the rated capacity is based on the semi-wet mix. The difficulty of loading into a raised hopper can be overcome by the use of an elevating hopper that is filled at the ground level and afterwards raised and tilted into the trough by a simple gearing arrangement, and this type should always be adopted for equipment of the portable type.

A very good example of what may be termed the ordinary type of batch mixer is the "Victoria," made by Messrs. Stothert and Pitt. This has a revolving mixing drum with hopper-shaped blades inside, and it is fitted with a

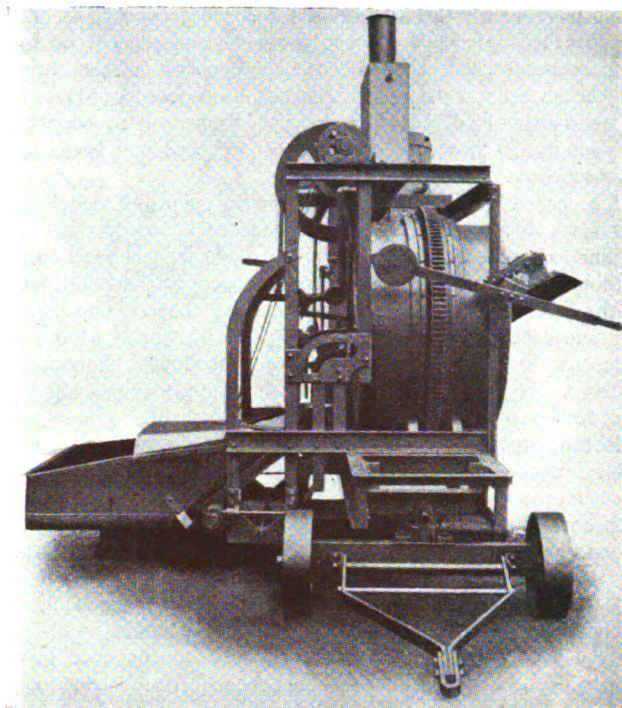


Fig. 161. "VICTORIA" BATCH MIXER WITH AUTOMATIC HOPPER.

fixed measuring hopper or with automatic loading hoppers that can be filled at the ground level.

This type of machine, which is illustrated in fig. 161, is so well known that no detailed description of the design or the operation is necessary, but it is interesting to note the large output that can be achieved with the ordinary batch mixer, which was one of the points put forward by the author as an advantage over the continuous type. The machine is made in four standard sizes, having capacities of 6, 10, 15 and 30 cubic feet respectively, and the output from the largest type will be 68 cubic yards per hour, if one batch per minute is discharged, as is possible with ideal loading facilities; and even if a good general average of 30 batches per hour only is allowed, the output will be 34 yards cube per hour, or over 270 yards cube per day of eight hours. The author does not know any continuous mixer which will produce an output approaching this amount, and therefore for large schemes the batch mixer must be considered the better type. Another example of a batch mixer that gives a large output is the "Smith" mixer, also made by Messrs. Stothert & Pitt, Ltd. The distinctive feature of this machine is the drum, which consists of two steel cones rivetted together, and which is discharged by tilting while running. The machine is made in five sizes, and the capacity varies from 6 cubic feet to about 62 cubic feet. With the latter size it is possible to achieve an output of approximately 69 yards cube per hour if 30 batches only are mixed in this time, while a speeding up of the operations may result in an output of as much as 120 yards cube per hour, or nearly one thousand yards cube in an ordinary working day. It will be realised that considerable speed in execution can be attained with a large output from the mixer, and economy must be effected if the whole of the concreting organisation is laid out to deal with the mixed material expeditiously, as explained in the previous notes.

Although extremely difficult to give reliable and indisputable figures showing comparative costs for different methods of mixing and handling concrete, it will be obvious that the elimination of hand labour is essential wherever possible if large output and low cost are to be maintained. Generally speaking, with hand-mixed concrete the output per man per day will not exceed 2 cubic yards; and if the

output of 270 yards cube, given as a reasonably low average for a large capacity batch mixer, is to be accomplished, it will be necessary to employ 135 men to do the work, as compared with about 10 or 12 men to load and operate the mixer where the arrangements are well planned. The employment of such a large force of men would be not only inconvenient, but also very expensive, as the wages at the current rate of 1s. 3d. per hour would entail the expenditure of £67 10s. per day for labour only; and if the output is 270 yards' cube, the cost per yard will be 5s. for mixing only.

The cost of mixing by machine will depend on the power used for loading the raw materials and for driving the mixer, but it certainly should not exceed 2s. per yard cube, which cost should include interest on capital expenditure, depreciation, maintenance and running costs. The wages for the men operating the mixer will only cost about £6 per day, and if 270 yards cube are produced the rate of 2s. per yard will equal £27 per day, which provides £21 per day for charges other than the actual pay-roll. The saving effected, on these figures, will be £30 per day, and it will therefore be obvious that the total capital outlay will soon be repaid. It is true that the mixer and other equipment will not be in operation every day during the execution of the scheme, and on many days the full possible output may not be needed; but if it can be employed on 100 working days, the saving at £30 per day would mean £3,000, and the amount of concrete mixed would be 27,000 yards cube, which is not an unusual amount on a large contract. It will be seen that the initial outlay will quickly be saved, and the plant will be available for a considerable amount of work either on the same scheme or some other when the cost has been entirely written off.

The saving on labour by the adoption of towers and chutes as compared with hand labour and wheelbarrow will also be considerable, as the average output per man for wheeling and depositing mixed concrete a distance of, say, 100 feet from the mixer will not exceed about one cubic yard per hour, and the cost will therefore be 1s. 3d. per yard cube. If the output of the mixer is again taken at 270 yards cube per day, it will be necessary to employ 34 men to wheel this a distance of 100 feet in wheelbarrows during the working day at a cost of £17 in wages per day; whereas with the chute and tower method the labour cost per day for transporting the concrete 100 feet will be negligible, and a saving of at least £15 per day will be made. The saving over 100 working days to place 27,000 yards of concrete will be £1,500, against which the interest on the capital expenditure, maintenance and depreciation only have to be placed. The use of buggies instead of wheelbarrows for transport by hand will result in a saving, as the work can be executed with two-thirds of the labour; and whereas hand transport with ordinary barrows will cost 1s. 3d. per cubic yard per 100 feet, with buggies it will only cost 10d. or 11d. The cost of transport with narrow-gauge track and horse-drawn vehicles has been dealt with on the comparative method in previous articles, and there is no necessity to give figures here for these methods. Sufficient notes have been given to show the very large saving in time, labour and cost with modern methods as compared with old-fashioned ways, and it would appear obvious to all those connected with the building industry that modern equipment is essential in concreting operations, and yet it is still quite a common sight to see work being carried on by obsolete methods, and even when some part of the operations has been modernised it is seldom that the whole sequence has been arranged with sufficient foresight to take advantage of all the facilities which exist for economical and good work. There is still considerable conservatism among architects and contractors in this country, and rapid progress is consequently very difficult.

An example of actual performances and cost of operation is put forward by Messrs. Builders and Contractors Plant, Ltd., in connection with the claim made by them that their patent "Roll" mixer is the most economical and efficient type to employ. They state that on one London contract three batch mixers were used, each of which had a capacity of one-half cubic yard, and all were operating under similar

conditions. The records show that the "Roll" mixer produced 293 $\frac{1}{2}$ -yard batches in one day at a cost of 3s. 7 $\frac{1}{2}$ d. for power, while the other two machines, which were of different makes, produced only 185 and 153 $\frac{1}{2}$ -yard batches respectively in the same time at power costs of 5s. 3d. and 10s. 5 $\frac{1}{2}$ d. respectively. The author has no means of confirming these figures, but they are interesting as showing the cost of the power required for operating concrete mixers, and how this cost may vary by practically 200 per cent. On another London contract a "Roll" mixer averaged 37 $\frac{1}{2}$ batches per hour throughout the whole week. These examples will indicate that a continuous output is not difficult to obtain with the batch type when the work is organised. The "Roll" mixer is different from what may be termed the ordinary type, as the mixing drum consists of two large clam shells which fit together to give a close joint while the mixing is being performed, and the discharge is effected by separating the two parts to give a space between through which the mixed concrete can fall beneath the machine. Another feature is the entire absence of any blades or paddles inside the drum, and the mixing is effected by centrifugal force and gravity brought into play by a few quick revolutions. The advantage of this type is that there are no parts to cause clogging or friction and the discharge is easy, while the minimum power is required in operation. The raw materials are placed in a loading hopper at the ground level, which is automatically elevated to give a discharge into a chute leading directly into the drum. There is a vertical clearance of 3 feet 3 inches under the drum and a width of 4 feet 6 inches, and this allows a receptacle to be placed in position to receive direct the mixed concrete, or a chute can be arranged for the direct discharge into the excavation when the machine is situated close to the place of deposit. One of the chief merits of this machine is its simplicity, and the risk of failure through breakdown is therefore very small.

There are several other makes of concrete mixers which will satisfy the requirements of the large contractor who is executing an extensive scheme, but the type will be similar to one of the few mentioned, and the merits and demerits will therefore be on about the same lines as those dealt with, and when deciding on the acquisition of concreting plant it will be advisable for the contractor to study the different machines in operation on some actual work, where any possible disadvantages will generally be apparent to a keen observer.

When the concreting installation is all arranged for any scheme it is absolutely essential to ensure a sufficient supply of raw materials, and it will obviously be impossible to maintain a uniform speed and output based on the capacity of the organisation if the supply of any one of the raw materials is insufficient or unreliable. The Portland cement should be ordered in large quantities by placing a covering order for the whole of the requirements of the scheme, with arrangements for shipping and delivery to give a continual supply sufficient to maintain a full storage shed at all times, and the capacity of the storage on the site should be sufficient to enable the work to be carried on for several days in the event of any unforeseen delay arising in the delivery owing to a breakdown in the rail service.

The source of supply for the coarse and fine aggregate should be investigated to ensure an adequate delivery, because it not infrequently occurs that an order for a large amount of material is placed with a firm who have ample material, but insufficient facilities for loading up and shipping large quantities continuously, and when the work has been in progress for a short time the supplies begin to fall off, and the concreting operations become disorganised. These points may appear rather obvious, but as a result of extensive experience the author would emphasise the necessity of considerable attention being paid to the question of the supply of the materials *before* the work is commenced. The task of loading and shipping sufficient aggregate to keep, say, two one-yard cube capacity mixers having a possible output of over 800 yards cube of concrete per day well supplied is one which justifies some consideration; and if the supplier is not under the direct control of the contractor, the vital importance of maintaining the schedule of

delivery will probably not be realised by the supplier owing to the lack of direct interest in the actual execution of the work.

The arrangements should provide for a surplus of materials, a margin in capacity of plant, a margin in power for operating, a certain and plentiful supply of water, sufficient labour, and a skilled supervisor. With the provision of these factors, combined with an organisation based on the principles outlined in the previous notes, the architect and the contractor can be certain that the concreting operations will be carried out expeditiously and economically, while the quality of the work will be of a high standard.

(To be continued.)

PART I.—I. Introduction, Steam shovels, Jan. 13; II. Steam shovels, Trench diggers, Jan. 20; III. Grab buckets, scrapers, Jan. 27; IV. Drag-line excavators, Feb. 3; V. Derricks and cranes, radial loader, paving-breakers, Feb. 17; VI. Surplus Soil Transport (Hand Labour), Feb. 24; VII. Surplus Soil Transport (Horse-drawn wagons, Steam-driven wagons), Mar. 3; VIII. Surplus Soil Transport (Steam-driven wagons), Mar. 10; IX. Surplus Soil Transport (Steam-driven wagons, Petrol wagons, Narrow-gauge track with wagons), Mar. 17; X. Surplus Soil Transport (Narrow-gauge track with wagons, Trucks on Standard-gauge track, Electrically-driven trucks and vehicles), Mar. 24.

PART II.—XI. Foundation Work (Ordinary soils, Soft soils), April 7; XII. Foundation Work (Soft soils), April 17; XIII. Foundation Work (Soft soils), April 21; XIV. Foundation Work (Soft soils), April 28; XV. Foundation Work (Soft soils), sheet piling, May 5; XVI. Foundation Work (Soft soils), steel-sheet piling, May 12; XVII. Foundation Work (soft soils), steel-sheet piling, pumping, May 19; XVIII. Foundation Work (Soft soils), pumping, May 26; XIX. Foundation Work (soft soils), foundation piles, June 2; XX. Foundation Work (soft soils), foundation piles (cont.), June 9; XXI. Foundation Work (soft soils), foundation piles (cont.), June 16; XXII. Foundation Work (soft soils), Waterproofing, June 23; XXIII. Foundation Work (soft soils), Waterproofing (cont.), June 30; XXIV. Waterproofing (cont.), July 7; XXV. Water Supply, July 14; XXVI. Concreting, July 28; XXVII. Concreting (cont.), August 4; XXVIII. Concreting (cont.), August 11; XXIX. Concreting (cont.) Aug. 18.

The Value of Tradition.

Somewhere, in one of his entertaining essays, Mr. Hilaire Belloc discusses the altered attitude of mind towards change or development now manifest, as compared with that which prevailed when he was a student, not so very many years ago, at Oxford. Then, he says, all change or development was regarded as progress towards an ultimate perfection. Now, and particularly since the war, a change is looked upon with doubt and apprehension. This thought suggests that perhaps modern progress has been too rapid, or, perchance, that it has not all been in the direction of perfection. Architecture is essentially a conservative art. It is true that there have been at various times, revolutionary changes; but, for the most part, development has come through a process of evolution. The change that took place in England when the vernacular mediæval Gothic passed, was in one sense revolutionary, because it shed the ideals of four or five centuries, and substituted those of the Renaissance. In another sense, it was evolutionary; the Gothic had ceased to be the natural expression of the day. The ideals that it represented no longer existed. The mundane glory of the mediæval church had given place to the secular order. Through this evolutionary process, for there was a transitional period, came the Renaissance into these countries. The Gothic Revival of the nineteenth century was in one sense a revolutionary movement, with all its striving after truth, was artificial, and therefore a failure—a phase which, for all its admirable effort, did much mischief, for if it did not kill the then existing tradition of England, it inflicted grievous wounds. Nevertheless, tradition still lingered, and a remnant was preserved. The Gothic Revival was a resurrection of ancient things, and in this wise a stirring of tradition; but they who directed it made the mistake of taking up certain phases or periods, and more or less accurately copying or adapting them. In this way, the majority in those early days of the Revival tried to recreate the work of the thirteenth century; again, the early French Gothic; and, yet again, the Lombardo-Ve-

netian Gothic—forgetful that it was the spirit, rather than the dead and dried bones of particular periods that mattered and should be sought after. In our own day, this has been more freely recognised—Liverpool Cathedral is an example of the truth, that it is not the form but the spirit that matters, and in it, and in other modern works, we get closer to the feeling and the tradition of Gothic than in the older and more correct reproductions of Gothic Art. Reproductions are comparatively easy to create, but are of little account. Like "Period" furniture, they are of small value. Nevertheless, the Gothic Revival is entitled to respect for its great ideals and its recovery of mediæval principles. Its chief fault was that it overlooked the fact that centuries had elapsed from the death of Gothic to its attempted revival, and during that time another tradition had been created. Taking it all-in-all, the Gothic Revival was the most outstanding movement of the nineteenth century in English architecture, just as the pre-Raphaelite was in painting. Indeed, the one was the counterpart of the other.

The greatest ill that the Gothic Revival brought about was its after effects. So long as the original movement subsisted, law and order prevailed; but, when a further development followed, it took on the form of what some people dignified by the title of "Eclecticism." It laid on one side the still living tradition, and endeavoured to combine the ideals of two opposite forces, and thereout, to compound a new style—an impossibility. The result was the loss of tradition, the decay of scholarship, and the rise of a school that grew more and more lawless in its tendencies.

The Gothic Revival itself was a remarkable movement to recover tradition, and, despite its failure as a whole, accomplished very much in sound scholarship and academic feeling in design, especially in its latter phases, both in England and America, so long as it was confined to purely ecclesiastical design, the only form of work remaining in modern times with any affinity to mediæval conditions. Take one of those plates of English or French Cathedrals from Sir Bannister Fletcher's "History of Architecture on the Comparative Method." Could anything be more "academic" than these ground plans? They are symmetrical, scholarly, shapely, absolutely conforming to Mr. Thomas Hastings' description of a good plan that "builds well." The great mistake of the Revivalists lay in their taking particular phases of Gothic and more or less accurately copying or adapting the style of the period, instead of laying hold of the spirit and the tradition and developing it. The difficulty of this was, of course, enormously increased by the hiatus of several centuries, almost without any link.

The preservation of tradition, which is the knowledge, skill and practice handed down from generation to generation, has been variously regarded in different countries at sundry times. In some, it has been strong; in others, weak. Architectural tradition prevailed strongly in England until the Gothic Revival. It has been strongest perhaps in France, owing no doubt to the influence of the Ecole des Beaux Arts and the association of the State with Art. America, a young country with no great traditions of its own, has in its wonderful architectural revival of to-day had recourse to two sources of inspiration—the one its own gracious eighteenth century "Colonial" architecture, with the old Spanish "Missionary" style of California; the other, the strong influence of the Ecole des Beaux Arts, with its marked adherence to French Renaissance traditions, leading in America ultimately to the development of a great modern and scholarly treatment of architecture, based on a profound knowledge of Classical and Renaissance Art.

In Ireland, there is the absolute opposite to be seen, namely, the complete rejection and anarchic discarding of the splendid native eighteenth and early nineteenth century tradition after about 1850 and the substitution of a weak imitative tendency that has neither relation to the country nor any tangible inspiration.

The value of tradition to a nation was well expressed the other evening by Mr. Thomas Hastings, of Messrs. Carrère and Hastings, of New York, on whom the Royal Institute of

British Architects conferred the most signal honour in their gift of the Royal Gold Medal. Mr. Hastings, tendering thanks to the Institute, said "that he believed we should return to tradition, and so do away with all the modern confusion. The practising architect, if he continued as he should do—to be a draughtsman all his life—must realise that beauty of design and line build well in construction, and with greater economy and endurance than construction which was mere engineering. The practical and the artistic were inseparable. The science of modern engineering had often divorced the architect from many of the larger and more interesting so-called utilitarian problems of construction. Architecture and all construction should be inseparable. The laws of the survival of the fittest would cause beauty to be predominate. When the plan looked well, it would build well. He believed that our old buildings had stood so long because the plans looked beautiful. Americans, too, realised that they came to Europe because of what man had done by art to beautify nature. For the art of man had made nature more beautiful."

When the history of architectural development in England during the twentieth century comes to be weighed, probably the most outstanding feature will be the effort to recover tradition manifested during the past twenty years. It cannot be described as in any sense a general national movement: it is due to the teachings of a very few men, who realised that English tradition had not been wholly lost with the opening of the nineteenth century, nor even with the rise and fall of the Gothic Revival, but continued down to our own day. Thus we find, on the one hand, a building of such good traditional and scholarly character as the Harris Memorial Library, by James Hibbert, at Preston—a milestone in the history of modern English Architecture—erected so late as 1884; and, on the other, the beginnings of a somewhat faltering reversion to academic tradition, a revulsion against lawlessness as early as about 1897 or thereabouts—a gap of little more than a dozen years or so. Even during this short interval, English tradition did not wholly perish, for a few men, notably in the City of London, upheld it. But it is only during more recent years that the real value and importance of tradition and its correct interpretation has begun to be realised. This has meant not so much the revival of the manner of Inigo Jones, or of Wren, or of any other particular master or period of the English Renaissance—as was at first, and still is, the tendency—but rather the logical picking up of the threads of tradition down to where they had been almost, but not wholly, lost. It implies the study of the works of all the latter masters as well, as for example those of such an essential modernist as Cockerell. In the insistence on this truth in particular, and on the value of tradition in general, no one has borne a more prominent part than Professor A. E. Richardson. His writings in the professional press, and especially the publication of his epoch-making work on the "Monumental and Classic Architecture in Great Britain and Ireland," have exercised a far-reaching influence on thought, not only in England but abroad. This teaching has borne fruit in—of all places in the world—Germany, commonly supposed to be filled with the anarchic spirit in architecture.

The publication in Munich of the third edition of a work entitled "Um 1800. Architektur und Handwerk im letzten Jahrhundert ihrer traditionellen entwicklung," by Paul Mebes, has escaped notice in these countries. It is significant that the second edition was called for very much sooner than either the author or the publisher had any reason to anticipate, notwithstanding that the first edition was published during the strenuous days of the war, while the preface to the second edition was written in 1918, just a few weeks before Germany's collapse. The preface to the third edition followed so soon as 1920. Thus three editions were called for in a short space of time, covering Germany's most disastrous period. It is indicative of the interest the book must have aroused that it should have run into three editions in such conditions. The work is an exposition of the value of, and a plea for, the recovery of tradition. The letter-press is limited to the preface, a brief introduction or foreword by Dr. Walter Curt Behrendt, and some descrip-

tive notes. The illustrations are all from photographs, and include small houses or cottages, town houses, country and town mansions, monuments, furniture, etc. Few public buildings are given, excepting only small provincial town halls and the like and minor palaces. The illustrations are well selected and representative, taken from all parts of Germany—from East Prussia to Bavaria. They include some Dutch and Danish examples, scarcely to be distinguished from German, and one or two American "Colonial." The examples are characteristic specimens of traditional German building, as done in the eighteenth and early nineteenth century, and are extremely interesting to look through; as a whole, quite good, distinguished by simplicity and excellent proportion. The aim appears to be to present the ordinary vernacular provincial architecture of the period rather than very important public edifices, which must of necessity be more or less cosmopolitan in character. Some of the Dutch and German work suggests how greatly Wren was influenced thereby. The Bishop's Palace at Münster might almost have been his. On the other hand, one or two of the German houses might well be English, as might also several of the examples of hall-doors. The interiors, the ironwork, and in particular the furniture, will be quite new to those not acquainted with provincial Germany and its architecture. The furniture is coarser than English of the same period, but it is very remarkable, some of it showing quite an Adam feeling. Some of the chairs might have been designed by Chippendale or Hepplewhite. It is difficult, however, to say whether this is due to English influence, or, what is more probable, the general trend of the time.

In a paper on "Modern German Architecture" lately reprinted, and read originally before the Architectural Association in 1915, Professor W. R. Lethaby, while actually saying very little indeed of German architecture itself, praised the Germans for their understanding of the English architects who flourished round about 1900, and lamented that "just as our English free building arrived, or 'at least very nearly did,' there came a timid reaction and the re-emergence of the catalogued 'styles'." Professor Lethaby seemingly deplors the revival of the academic spirit in England, with its appreciation of the value of tradition. No one's opinion on architectural matters in England is entitled to greater respect than Professor Lethaby's, but one ventures to doubt if he is right in his exalted appreciation of the English "free" architecture of twenty odd years ago, unless it be in the domain of domestic and cottage building. If we are to take the achievements of "free" architecture in Germany, whether influenced by England or not, it is for the most part, to the ordinary eye, merely ugly. Take, for instance, the Cologne Theatre (1914), or in Holland the design for the Amsterdam National Theatre, both illustrated in a recent paper by Mr. Gordon Holt. The one looks more like an aerodrome, the other a singularly hideous gasometer, and if we may judge from Herr Mebes' book, the Germans themselves are revolting against the new "Free" architecture and turning their thoughts once again to tradition. Herr Mebes and Dr. Behrendt, the writer of the introduction, unlike Professor Lethaby, instead of lauding the "free" German architecture of "round about 1900," plead almost passionately for a recovery of the tradition of "round about 1800." They even draw a political and social parallel between the condition of Germany in 1800 and in 1918 or 1920 as a further logical justification for simplicity, restraint and dignity. Herr Mebes says of this new architecture—"Everyone who has a love for the beauty of his country must 'bleed from the heart,' when in the course of his wanderings he sees 'those fearful erections' which the hands of the enemies of nature and art have created." He recalls the buildings of 1800, and he cites the great façades, with their fine fenestration, the excellent churches, town and country houses and mansions, palaces, theatres, courthouses and even cottages, and asks—do they not afford inspiration for the modern builder? They breathe a spirit that the modern buildings lack. Then, he adds, more beautiful and more comfortable furniture was made about the same time than any since, and he declares the same of the other handicrafts.

Studies of the English Sculptors from Pierce to Chantrey.*

XIX. Thomas Banks, R.A. (1735-1805).

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"Thomas Banks, R.A., was a sculptor of no common merit," says a writer in the "Gentleman's Magazine" (1818, I., p. 598). "His academy figures excelled those of his contemporaries, as his 'Falling Giant' will ably attest. A sleeping child of Sir Brooke Boothby at Ashbourn in Derbyshire is seraphical, and the figure of Victory upon the monument of Captain Burgess in Westminster Abbey [St. Paul's] deserves to be ranked among the happiest efforts of sculpture in England." Flaxman's address on the death of Banks is yet more eulogistic, and certainly more familiar to modern readers; and Reynolds's dictum that he was the first artist of his country to produce works of classic grace is a much earlier and more important tribute, since it came from the lips of one who had known, and known well, the sculptors of an earlier age. It is for us to see how far these eulogies are justified.

Thomas Banks, the eldest son of the Duke of Beaufort's land steward, himself something of an architect, was born at Lambeth on December 29, 1735. His father gave him a fair education at a school at Ross, in Herefordshire, and encouraged his artistic abilities; but though Macpherson's Homer is said to have been the work which gave his tastes the classic bent so remarkable in his art, that work only appeared when he was twenty-seven and had long embarked on his classical subjects. Equally inaccurate is the statement that his father placed him as a pupil with William Kent, since that artistic jack-of-all-trades died when the boy was just over twelve, and so can by no possibility have been his master. What is certain is that at the age of fifteen he was placed with one Barlow, an ornament carver, and received seven years' training, working for his master from 6 a.m. to 8 p.m., it is said, and then going to the neighbouring studio of old Scheemaker for two or three hours every night. When his time was up he became a student at the St. Martin's Lane Academy, obtaining various premiums from the Society of Arts in 1763, 1765, 1766 and 1769. It was presumably towards the end of this period that he married an heiress of the name of Wooton, and set up for himself in Bird Street. To the second and subsequent exhibitions of the Royal Academy he sent various models, which won the cordial approval of Reynolds and caused him to be elected to a travelling studentship in 1772. Armed with an introduction from Agostino Carlini, R.A., to his old friend Capizoldi, the sculptor of the bas-relief on Wilton's monument to General Wolfe, he and his wife set out to Italy, where, as he wrote to his friend Nathaniel Smith, once Roubiliac's pupil, now Wilton's assistant, he learnt the art of cutting marble, "in which the Italians beat us hollow." He made notes on ancient statues, executed the relief of Thetis consoling Achilles now in the Tate Gallery, sent a couple of works to the Academy, and produced three works of high merit—the relief of "Caractacus in the Presence of Claudius," exhibited in 1780, which (1922) is still in the hall at Stowe, the model for which is in the Soane Museum; a figure of Love seizing a butterfly, the emblem of the soul; and a much-praised "Psyche plucking the Golden Wool," the model for which was shown in 1781, and which represented the Princess Sophia of Gloucester. In 1779 he returned to London, took 205 Newman Street, and, discouraged by finding no purchaser for his Love, took it, but not his wife, to St. Petersburg, where the Empress Catherine bought it for £380 and gave him a commission to execute the "Armed Neutrality" in marble. The subject is supposed to have

frightened him into returning to England in 1782, but it is at least more susceptible of sculptural treatment than the invention of ventilators, which Wilton actually represented in Westminster Abbey; and it is more probable that want of patronage, rather than patronage misdirected, led to his return. Two years later he was made an A.R.A., in 1786 R.A., and thenceforward his art is the chief interest of his career. The "Falling Titan" which he presented to the Royal Academy as his Diploma work had given a foretaste of his powers in the romantic and sublime; his "Mourning Achilles" now gave a greater. It never reached the marble stage, but remained in the family as a plaster model until, after his death, his widow presented it to the British Institution, after which it was until 1899 exhibited in the hall of Burlington House. It has now disappeared, whether broken up for a second time—it was shattered into five hundred pieces on its way to Somerset House in 1784, and pieced together by the sculptor and his younger brother Charles—or mislaid, or otherwise disposed of, no one seems to know. A noble and impressive work, its loss is the more to be regretted that it does not appear to have been engraved, even by the sculptor himself, whose two etchings of his Falling Giant and his proposed monument to Captain Cook may be seen in the British Museum. Of his work for Coade's Artificial Stone Factory the writer can specify no example.

His friendship with Horne Tooke and others of extreme opinions led to his momentary arrest in 1796, but though he was taken to the Secretary of State's office, he was instantly released, and no other untoward incident clouded his blameless and happy life. He encouraged young students, notably the little Mulready; collected drawings by the old masters; read Froissart; and at the end of his peaceful career was buried in Old Paddington Churchyard, where his gravestone is now a foot below the soil (Whitten's "Nollekens," vol. ii., p. 129, n. 2). The writer possesses a contemporary watercolour drawing of this tombstone, the inscription of which is, in these circumstances, worth giving: "Under this Stone are deposited the Remains of THOMAS BANKS Esq^r R.A. of Newman Street in the parish of St Mary-le-bone, who died February 11th MDCCCV, aged LXX years. His principal Works which decorate Westminster Abbey, and St Paul's Cathedral, prove his superior Abilities in his Profession. His Heart was unblemished as his Talents were rare." The same writer presumably composed the brief inscription on the tablet to his memory in Westminster Abbey.

Most of Banks's works were exhibited at the Royal Academy, and their titles, reprinted by Mr. Graves, are easily accessible; the subjects of those which won premiums from the Society of Arts are given in the "Dictionary of National Biography." It seems better, therefore, to confine ourselves here to a classified list of the sculptor's works which the writer has been able to verify, first noting that a large number were lost in a disastrous fire at Hafod, Cardiganshire, the seat of his chief patron, Colonel Johnes. With Johnes, however, the great disappointment of Banks's life was connected. He had commissioned the Achilles in marble, and a superb block was even bought for the purpose, when the patron changed his mind and ordered a group of Thetis dipping the infant Achilles in the Styx, Mrs. Johnes sitting for Thetis and their infant daughter (!) for Achilles.

The nine works by Banks in the Soane Museum, the model of Speaker Chaloner Chute at the Victoria and Albert, and his monuments in Westminster Abbey and elsewhere make London an admirable centre for the study of Banks's art in all its aspects—viz., theological, religious, decorative, sepulchral and portrait; but fully to appreciate what he was capable of, Ashbourne and the Vyne, Hampshire, must both be visited, since they possess beyond comparison the best of his works.

Westminster Abbey.—1. Monument of Sir Eyre Coote. A

* For preceding articles in this series see:—Introductory Article, July 1; Nicholas Stone (1587-1647), July 8; Edward Pierce (ob. 1698), Sept. 2; Caius Gabriel Cibber (1630-1700), Sept. 16; Grinling Gibbons (1648-1721), Sept. 30; John Bushnell (d. 1701), Oct. 7; Francis Bird (1667-1731), Oct. 21; Peter Scheemaker (1690-1771?), Dec. 9 and Feb. 10; John Michael Rysbrack (1693-1770), Mar. 3 and April 7; Louis François Roubiliac (1695-1762), April 21, June 16 and June 23; Joseph Wilton (1722-1803), June 30; Some Minor Sculptors, July 21, Aug. 11 and 18.

pyramidal design showing Victory hanging up a medallion of the conqueror on a large palm tree. A trophy of flags and a not unsuccessful figure of a mourning Mahratta reclining on a sarcophagus, to which a figure of an elephant in relief gives local colour. A poor and unsuccessful work. Engraved in the "European Magazine," August 1, 1790.

2. Monument to Dr. Watts, with bust and relief of the Doctor inspired by an angel.

3. Monument to William Woollett, the engraver (in the cloisters), with bust and relief showing him engraving a sheet of copper in company with Painting, Sculpture, Fame, and Genius.

St. Paul's.—1. Captain Burgess, "Commander of His Majesty's ship *Argent*," naked but for a small chlamys, receiving a sword from Victory, a cannon and cannon balls at their feet; on the pedestal below figures of captives imitated from the antique, and other symbolic objects.

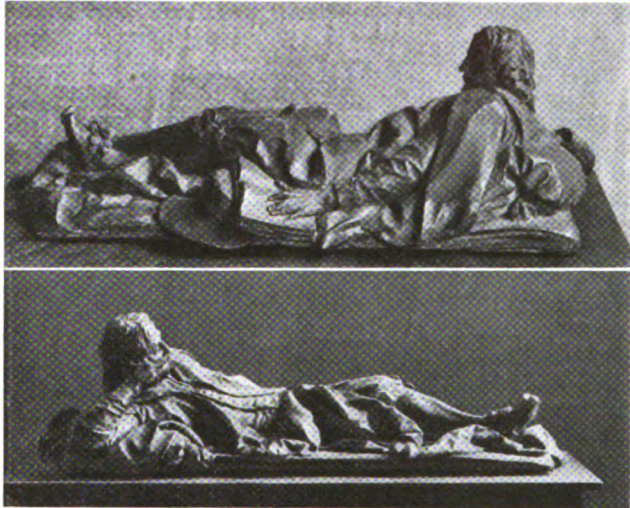
2. Captain Westcott, in scanty drapery, sinking into the arms of Victory, while the French ship "*L'Orient*" blows up upon the pedestal beside a sphinx (typifying the scene of the battle of the Nile) and a figure of the Nile.

Few monuments, even in *St. Paul's*, have fewer merits than these works.

National Gallery of British Art.—Thetis rising from the sea to console Achilles.

National Portrait Gallery.—Bust of Warren Hastings.

Victoria and Albert Museum.—A model for the recumbent figure of Speaker Chaloner Chute at the Vyne, Hants; a



[Reproduced by permission]
MODEL IN THE VICTORIA AND ALBERT MUSEUM FOR THE MONUMENT OF SPEAKER CHUTE AT THE VYNE, HAMPSHIRE.
BY THOMAS BANKS, R.A.

fine and impressive work in the great style (to use a significant eighteenth-century critical phrase), here for the first time reproduced.

Burlington House.—1. Chalk drawing of the head of an Academy model.

2. A Falling Titan; a noble and imaginative work, producing a colossal effect though on a small scale. Excellently etched by the artist.

British Museum.—Etching of a proposed allegorical monument to Captain Cook; an ill-composed work with sarcophagus, bas-relief, rocks and naked figure; a mast with furled sail in the background, and a mourning Britannia tying a fillet to a trophy.

Soane Museum (where a mask of his face is also to be seen).—1. Model for the Penelope Boothby at Ashbourne, here first reproduced by kind permission of the Curator, Mr. A. T. Bolton, F.S.A.

2. Model for a proposed monument to Earl Howe, a good work with a figure of Howe and a naval column as a background.

3. Angels releasing St. Peter from prison; small decorative panel showing a curious mixture of Raphaelesque inspiration and Newgate-like detail.

4. Caractacus before Claudius, model for the relief at Stowe.

5. The Dying Patriot, based upon the "Dying Gaul," but an original work nevertheless.

6. A Hindoo subject: Krishna and one of his wives seated on a crocodile. A gift from Banks to Soane.

7. Cast of one of the two medallions commissioned by Soane for the Lothbury Court of the Bank of England.

8, 9. Banks's own small copies of the medallions of Morning and Evening on the Arch of Constantine (scale $\frac{1}{4}$ of the original), on which he based his own medallions at the Bank of England, where the two subjects may be seen.

(Old) *St. Marylebone*.—Mural monument to Dr. Johnson's friend Barette.

St. Mary-le-Bow.—Mural monument to Bishop Newton, with Religion leaning on a sarcophagus, on which is a circular relief showing another Religion mourning over a bust of the Bishop as tall as herself. A much larger work was originally intended by Mrs. Newton.

St. Giles's, Cripplegate.—Mural monument to a Mr. Hand.

Whitechapel.—Monument to Dr. Robert Markham, representing Piety weeping at the Tomb of Benevolence and reclining against "a large sarcophagus-like urn, taken from that of Cæcilia Metella in the Campo Vaccino at Rome" (Nichols), on which is a relief of the Good Samaritan.

Stowe (not sold in 1921).—Caractacus before Claudius, marble relief.

Lewisham.—Monument to Mrs. Petrie.

Stratford-on-Avon.—"Alto-relievo of Shakespeare between Poetry and Painting," executed for the front of the Boydell Gallery (afterwards the British Institution), and now in the garden of New Place, Stratford-on-Avon. If the student will compare this work with the Shakespeares of Scheemaker and Roubiliac already mentioned, he will have one more valid reason for disputing the claims of Germany on the one hand and Coleridge on the other to have rescued Shakespeare from oblivion, since three great sculptors in 46 years were thus employed by Englishmen to do him honour.

The Vyne, Hampshire.—In a mausoleum attached to the chapel of this great historic house is a noble recumbent figure on an altar tomb of Chaloner Chute, Speaker of the House of Commons from 1658–9, after an original by



ORIGINAL MODEL IN THE SOANE MUSEUM FOR THE MONUMENT OF PENELOPE BOOTHBY AT ASHBOURNE. BY THOMAS BANKS, R.A.

Vandyck. This admirable work ranks with the Penelope Boothby as the highest achievement of the sculptor's genius, and was erected by the Speaker's great-grandson, John Chute, the friend and correspondent of Horace Walpole, in memory of his great ancestor.

Ashbourne, Derbyshire.—From its first exhibition at the Royal Academy in 1793, when the Queen and Princesses burst into tears at the sight of it, the recumbent figure of the little Penelope Boothby has moved all who have seen it. The child, in the muslin frock and sash of daily life, lies in an uneasy sleep, with clutching feverish fingers. "She was in form and intellect most exquisite," says her father's pathetic epitaph, and the sculptor of this "seraphical" work would be immortal on the strength of it alone.

Dublin.—When the great Customs House was being built by James Gandon during the closing years of the eighteenth century, Banks was called upon to design the figures for the attic storey—Industry, Commerce, Wealth and Navigation. They are probably the latest works by a great English sculptor to be executed in this baroque manner, of which Bird's statues on St. Paul's are the most conspicuous English example.

Madras.—Statue of Lord Cornwallis, one of three in honour of this statesman.

It should be added that Mr. Gosse speaks with enthusiasm of an unfinished statuette of Achilles Arming, whose whereabouts he does not give.

Banks was no inconsiderable portrait sculptor, but modelled comparatively few busts. Those of Horne Tooke and Warren Hastings were done "for the love he bore to their noble looks," and the last, in the National Portrait Gallery, is a work of great charm; its subject had something, in the sculptor's opinion, "more akin to his notions of some of the great men of antiquity than in any living head he had ever met with." Over his classical works it is harder to be enthusiastic. They have the defects of the neo-classicism so conspicuous in Canova and Thorwaldsen, and a style founded, like Banks's, on the copies of the great works of antiquity which fill the Italian galleries and were then believed to be Greek originals is bound to be unsatisfactory. Roubiliac thought about Pope's headaches when he studied the lines of his suffering face; Banks meditated upon Plutarch when representing Warren Hastings; the contrast is an epitome of the difference between the first and second halves of their century, before and after Winckelmann had overthrown the living art of Europe and established in its place an imitative classicism which was bound to be false because based upon the work of copyists. It is when Banks breaks away from these things, when he creates the recumbent figures of a child and a statesman, that he becomes a sculptor worthy to rank among the great artists of his age and country.

Like his admirer, Flaxman, Banks had a taste for Gothic art. When the Guildhall figures of Religion, Fortitude, Justice, Temperance, Law, Learning, and Christ were removed from the Guildhall chapel and left in a cellar, he gratefully accepted them as a gift from Boydell. After his death they were purchased by Henry Banks, M.P., and will be found engraved in Carter's "Ancient Sculpture and Painting." His genius, however, never, like Flaxman's, took a Gothic turn; he was content to Hellenise, to think in terms of Homer and the Antique as he understood them; but it must frankly be said that his public monuments are failures. Captain Burgess receiving a sword from Victory is almost the worst monument in St. Paul's, the huddled allegory of the pedestal, with its reminiscences of Trajanic and Pheidian art, being only less bad than the almost naked hero with a cannon at his feet. It is the first of the inanities with which the Peninsular War was to fill our churches and cathedrals, and which, more than anything else, were to bring English sculpture into disrepute; to compare it with the work not of Roubiliac only, but of Scheemaker and Rysbrack, is to appreciate the blight which the imitation of the Antique was to bring upon our art. It is only when Banks forgets his classicalities that he becomes a true artist, and Penelope Boothby and Speaker Chute are there to show us the originality possible to a great mind working upon traditional lines.

Stability of Westminster Cathedral.

The question of the erection of a grand organ, with an estimated total weight of twenty tons, in the west gallery of Bentley's masterpiece gave rise to a consideration of the capability of this part of the building to sustain the extra weight and vibration. Consequently the advice of Sir Francis Fox was sought, and we give below extracts from the reassuring report on the structure of the Cathedral. After advising by way of precaution the erection of tie-rods (now in position) below the west gallery, Sir Francis Fox goes on to report upon the Cathedral building in general as follows:—

"Westminster Cathedral is founded partly upon an existing concrete raft, which had been the foundation of the Coldbath Fields prison, previously occupying the site, and partly upon new piers. The weight is well distributed, except that the portion of the foundation below the tower is probably more heavily loaded.

"At the present time a number of cracks may be observed in the structure, more particularly at the north side, and there is evidence of considerable settlement of the more massive part of the main building in relation to the comparatively light porch at the entrance. These cracks have been kept under fairly close observation in recent years, a number of glass indicators, or 'tell-tales,' having been fixed across them.

"There is no doubt that during construction, as the pressure on the foundations increased, the building settled under the load, the movement of the heavy main structure being more than that of the lighter surrounding portions; this relative movement would cause such cracks as those visible over the north-west entrance porch.

"Nothing can be observed in the form or distribution of the cracks which would lead to the conclusion that they arise either from the use of the old prison foundation or the possible overloading of the foundation below the tower; they occurred during the construction or shortly afterwards. Possibly they are due to some extent to unequal settlement of the portion of the foundations under the tower, but they are, I believe, the result of the outward thrust of the domes of the roof.

"It is almost inevitable that when the centering, which supported these domes, was removed, the pressure from them caused a slight outward movement and flattening of the crown, and most of the cracks are consistent with this disturbance. The movement does not appear to have been accentuated in recent years, but the fact must not be overlooked that a crack, whether narrow or wide, remains a crack, destroys the continuity of the structure, and should not be disregarded. Cement or glass indicators in the meantime should be placed across the visible cracks, and kept under observation, but arrangements should be made for forcing in cement under pressure by means of the grouting machine.

"Some calculations have been made of the existing pressure upon the brick piers of Westminster Cathedral, with the conclusion that the walls and piers at the north side are not overloaded, with the exception of the transverse arches across the nave. These, in consequence of the outward thrust, are heavily strained, and it would be very desirable that some remedy should be applied.

"The fine tower seems to be vertical, and in good condition, and a careful examination has not revealed cracks.

"(Signed) FRANCIS FOX."

The representatives of operative builders sitting upon the Hull Technical Advisory Committee for the Training of Ex-servicemen have reaffirmed their decision that no more trainees should be accepted at present in view of the existing unemployment. The Minister of Labour intimated that the Government instructional factory would not be closed if the building trade committee would pass 80 additional men for training and the furniture trade would pass 30 men. Otherwise the retention of the factory could not be justified. The operatives replied that the present position rendered the proposition impracticable.

The site of the earliest Christian monastery in Ireland has been found at Atmahee Island, Strangford Lough, near Belfast. The ruins have been identified as those of Nendrum Monastery, mentioned in Muircha's Life of St. Patrick, written before A.D. 690. In Bede's Ecclesiastical History it is recorded that in 634 Pope Honorius wrote to certain Bishops of the Irish Church about the Paschal controversy and Pelagian heresy, and one of the bishops mentioned in this letter is Cromous, Bishop of Nendrum. The island of Nendrum was subsequently named after a bishop of the monastery. The Belfast Natural History Society have carried out extensive excavations and unearthed valuable material, including some stones with writing, the exact meaning of which has not been ascertained. Some of the writings are believed to be of Danish origin.

The Constructional Steelwork of Furness House.

The steel construction work for this building, which we have recently illustrated and of which Mr. M. E. Collins was architect, was carried out by Messrs. Moreland, Hayne and Co., Ltd., 80 Goswell Road, E.C.1, under the superintendence of Ralph Freeman, Esq., of Sir Douglas Fox and

Partners, under the terms of the 1894 Building Act. By this means a considerable weight of steel was saved, the only alternative being to construct a steel framed building under the 1919 Amendment Act, which would have entailed the use of much more metal.

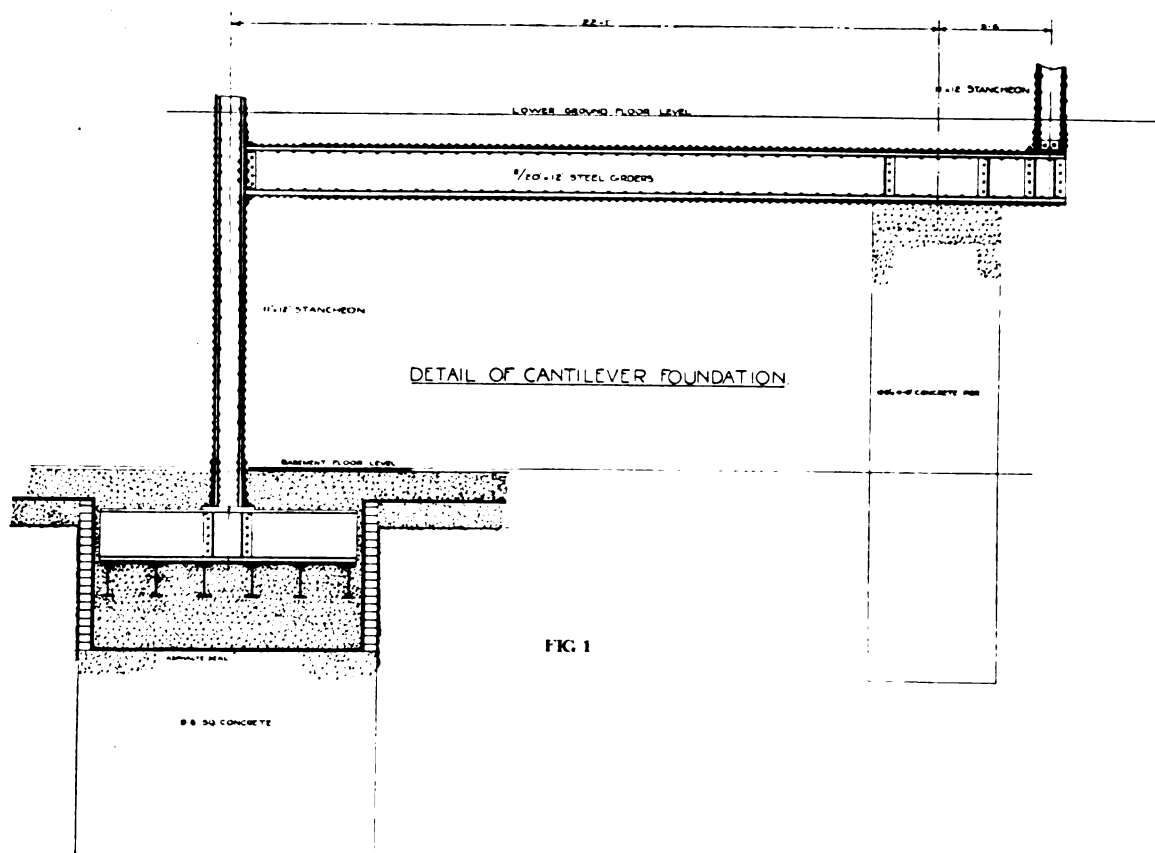


FIG. 1

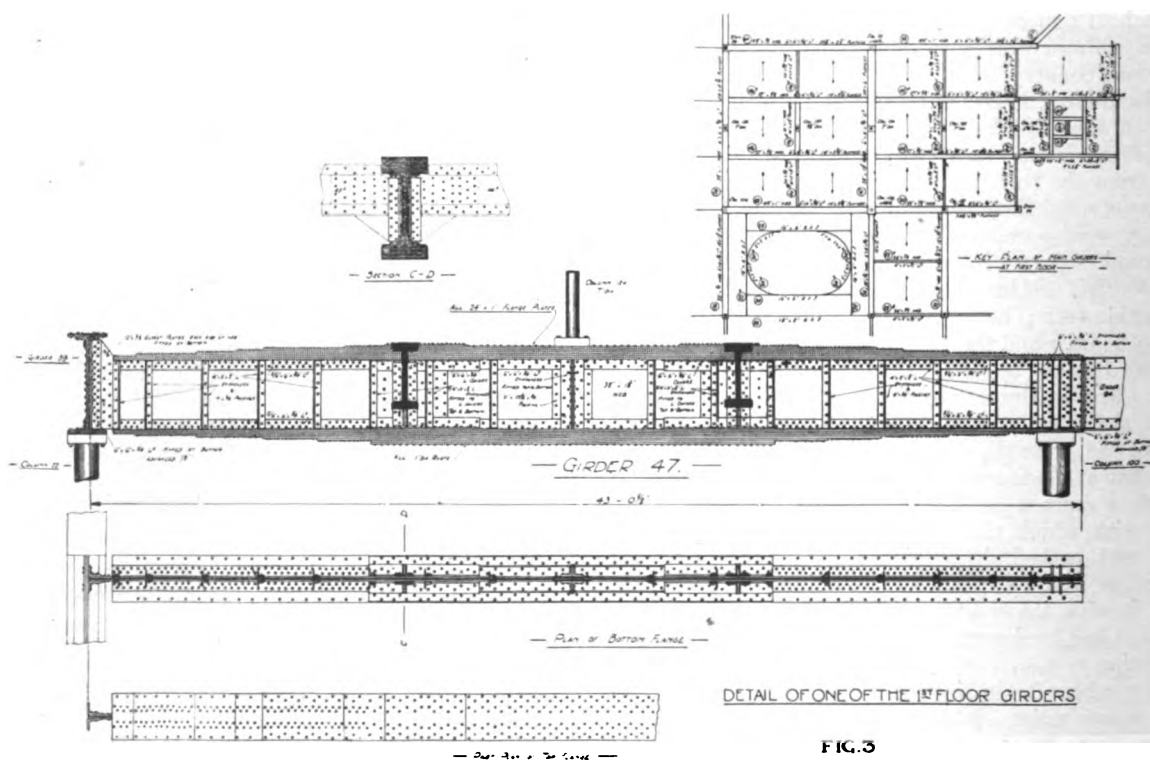


FIG. 3



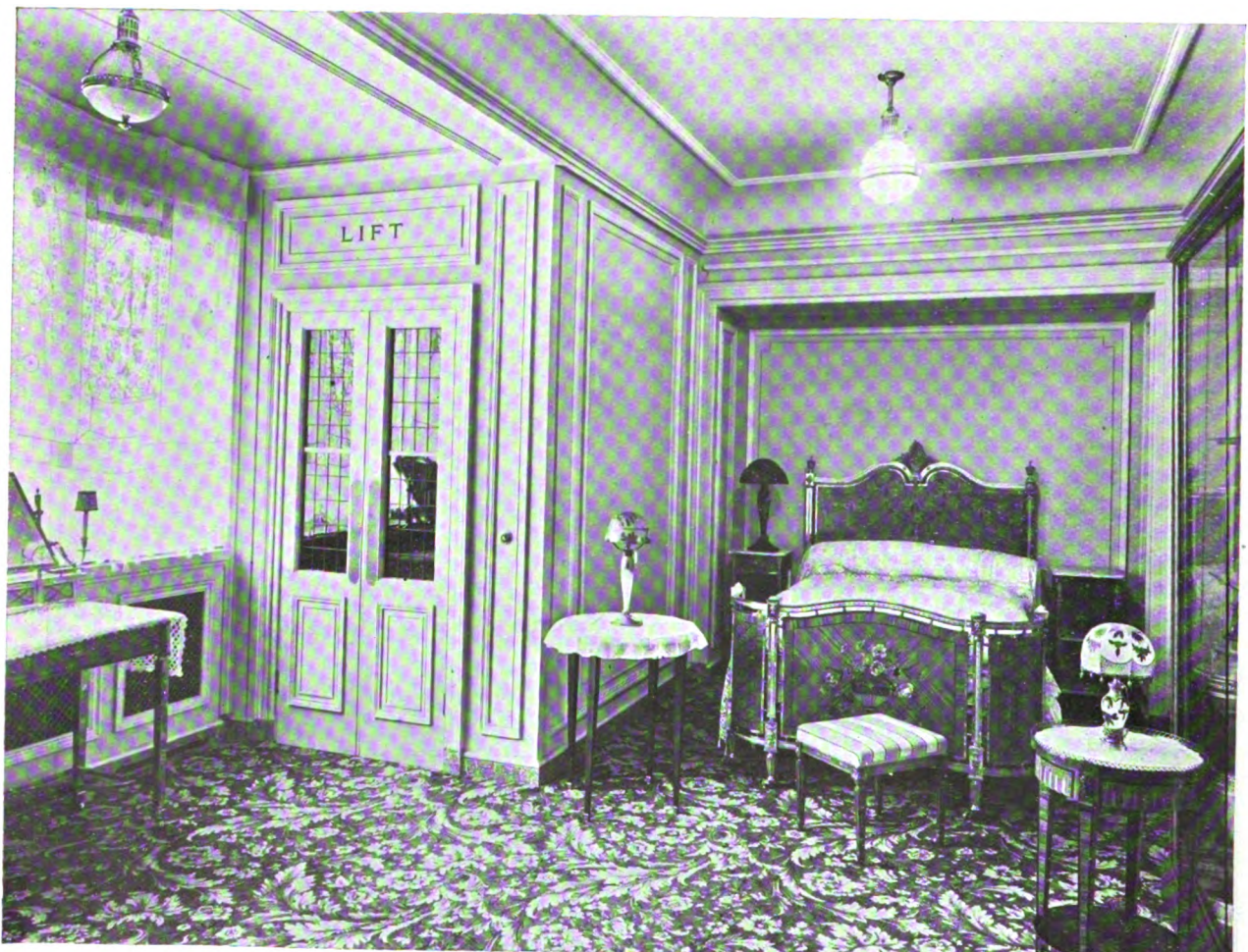
LOUVRE DE PARIS. OXFORD CIRCUS, LONDON, W.

MEWES & DAVIS, ARCHITECTS.

EXTERIOR FAÇADE FROM THE DESIGNS OF HENRY TANNER, ARCHITECT.



RESTAURANT AND TEA ROOMS 5TH FLOOR



INTERIOR VIEW OF ONE OF THE SHOW ROOMS.



MAIN STAIRCASE 1st FLOOR.



LOUVRE DE PARIS, OXFORD CIRCUS, LONDON.

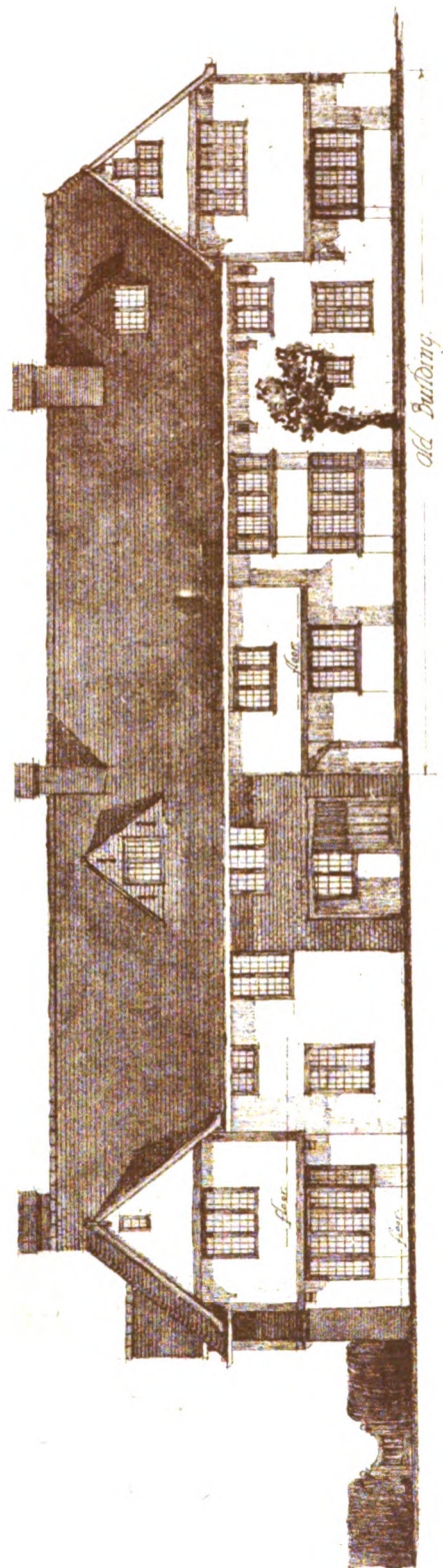
MEWES & DAVIS, ARCHITECTS.

EXTERIOR FAÇADE FROM THE DESIGNS OF HENRY TANNER, ARCHITECT.

THE ARCHITECT, AUGUST 25th, 1922.

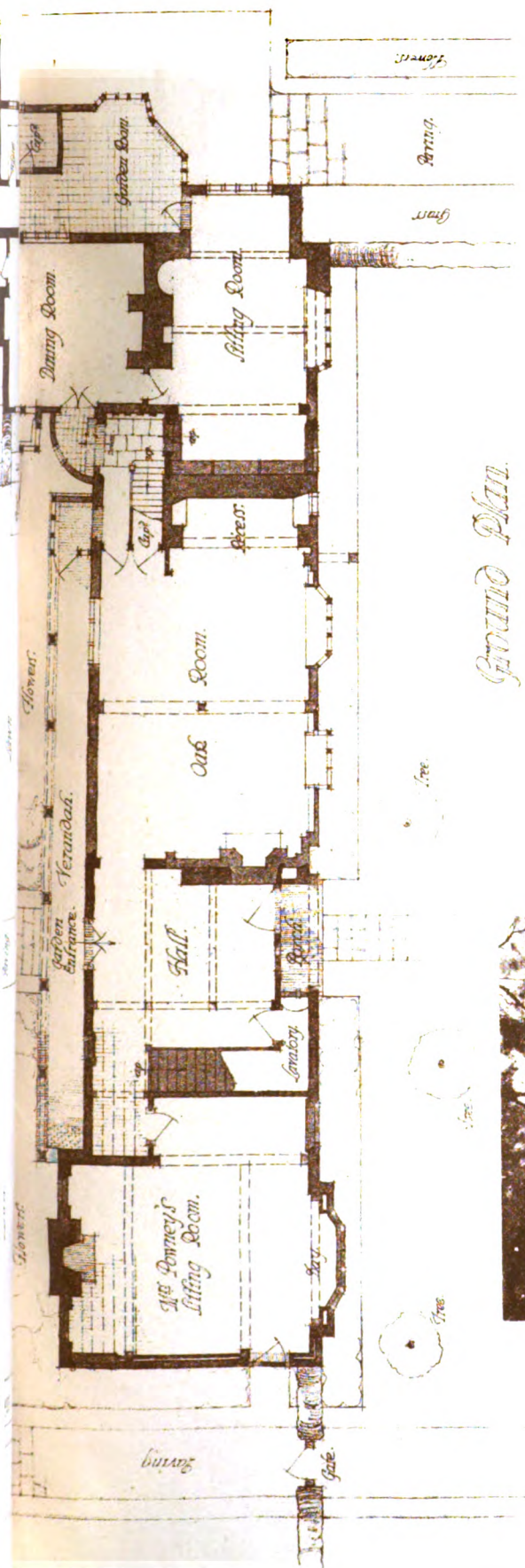
LENHAM COURT - MAIDSTONE - KENT

Additions for Col Cecil Portney

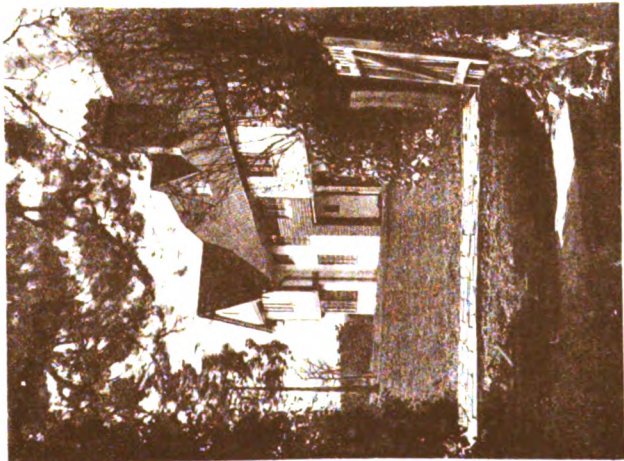


South Elevation

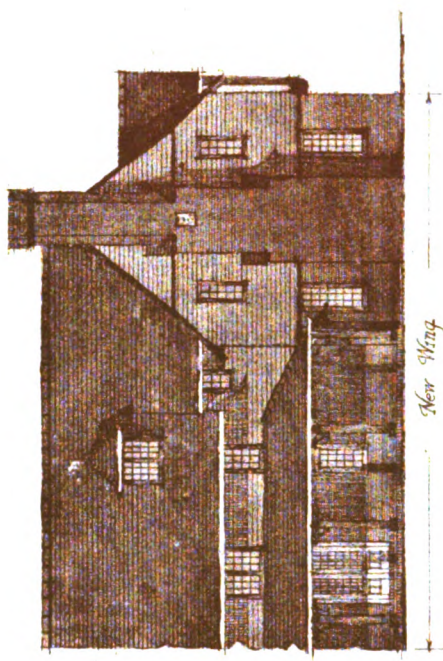




GROUND PLAN.



View from South-East



North Elevation

Scale of Feet 0 10 20 30 40 50 60 70 80 90 100

ARCHT
DRAUGHTSMAN

Walter Carr
ARCHT

22 GRANVILLE ST. W.I.
MARCH 1924

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The superimposed loads on the floors were taken at 100 lbs. per square foot.

The basement and sub-basement, owing to water troubles, were in part formed with asphalt tanking, forming a complete tank. Several of the stanchion foundations were cantilevered to avoid interfering with the foundations of the adjoining properties. Details of these are indicated on fig. 1.

One of the chief constructional features in the design was the four solid steel columns used to support the superstructure above the great hall. These were 28 feet 8 inches high, and the largest diameter was 14 inches, and this had to carry 650 tons. (Shown in fig. 2.)

The planning of the floors on and above the first floor entailed considerable consideration as to vertical supports, owing to lighting areas, etc., etc., and hence a grillage of very heavy girders was adopted and rested on the main girders carried by the four columns above referred to. These girders were about 40 feet centres, and a figured detail of one of these girders is shown in fig. 3. On the above girders columns were fixed in the position desired.

These internal vertical supports were constructed of solid steel columns, the object being to minimise the obstruction of floor areas. The architect formulated a suggestion, which was developed by Mr. Ralph Freeman, who designed a very ingenious method of constructing all floors without any beams coming down below same, thus securing complete flat areas to the ceilings, and obviating the use of beams with consequent enclosures, cornices, etc.

This construction was secured by means of angles and plates and channels forming cantilevers, and passing on each side of the solid columns, the column connections being in the floor construction, and therefore invisible. A detail of this is shown on fig. 4.

The steelwork was delivered in both Fenchurch Street and Leadenhall Street at all times of the day, and was dealt with by electric cranes without any stoppage to the traffic and cessation of fixing, thus expediting the construction of this vast building.

DETAIL OF STANCHION & LONG COLUMN IN BANKING HALL

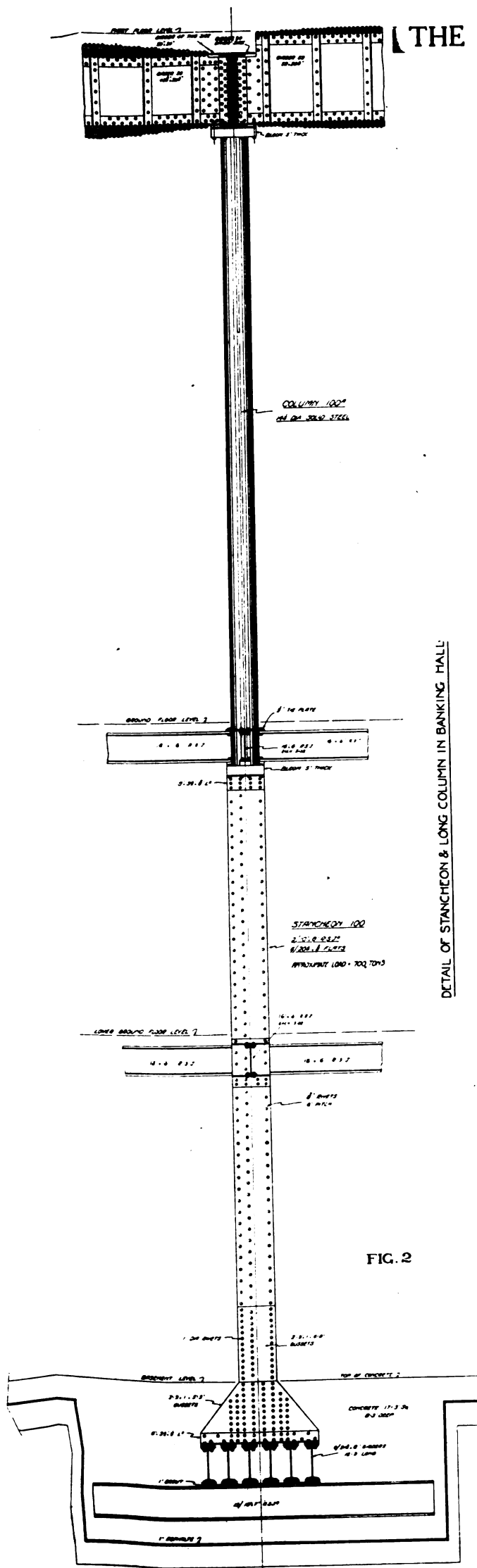


FIG. 2

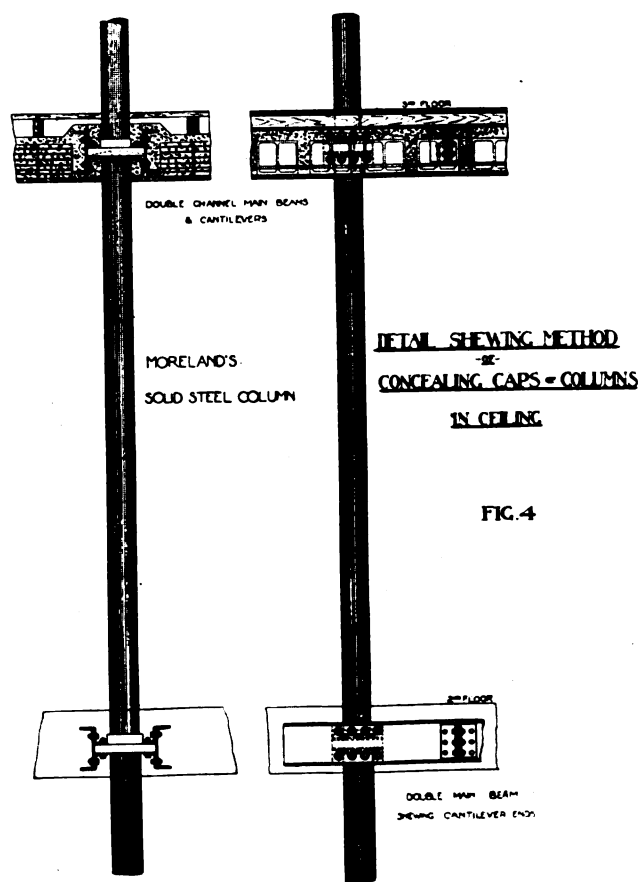
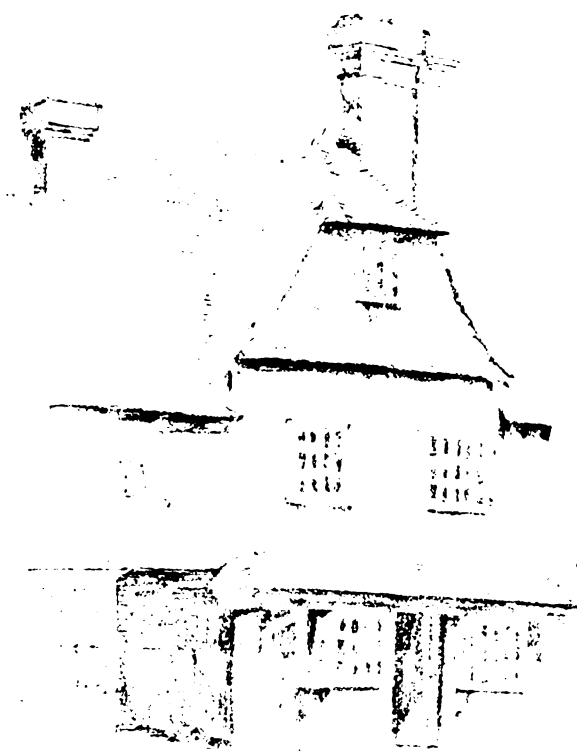


FIG. 4



IN CRANBROOK HIGH STREET.

Old Wealden Houses

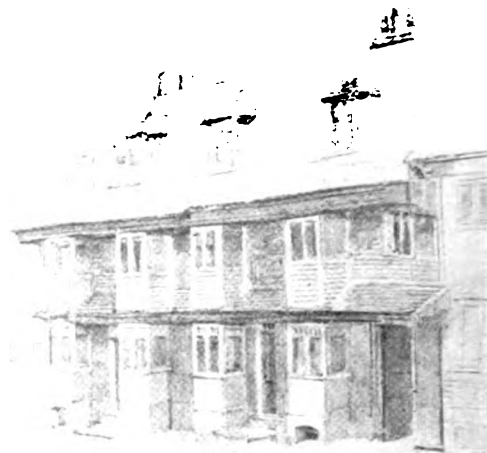
By A. C. AMOORE: Illustrations by BETH AMOORE.

A holiday spent in the Weald of Kent, studying the old houses and churches there, has inspired me with the conviction that the former offer most useful models for the architect in designing homes of modest size for clients of taste but of limited means. The churches, too, are fine specimens of ecclesiastical architecture; but it is of the domestic work that I want here to speak.

Probably a good many architects are familiar with these pleasant old homes, and I can fancy that the designer of certain bay-windowed houses in Mulberry Walk, Chelsea, has derived some ideas from this same source; but to architects and clients who have not considered the type of house prevalent in the Weald, I would like to address myself, because I believe it is of great promise.

A strong family likeness runs through all the houses, and two or three of the illustrations I give are typical of hundreds of dwellings in the small towns and villages or in the countryside. The essential characteristic is the use of red tiles, alike for the covering of the walls and of the roofs, and when handled with extreme simplicity and taste they give that homeliness and repose which are so much to be desired. The material generally used for the ground floor is red brick, with the tiles for the upper storeys and roofs; and although the same tiles are not employed for the two purposes, they go admirably together. Both weather beautifully, the deep rich red of the roof tiles being softened by lichen to orange or brown. In some cases, however, weather-boarding, painted white, is employed for the upper storeys, the ground floor again being usually of red brick. Here, too, the effect is very happy.

Another characteristic feature is that the end walls are not carried up to form a complete gable, but the top of the gable is cut off and finished by a small hipped roof. This method is shown in one or two of the illustrations. In this respect the houses differ from those to be found rather farther to the east in the Romney Marsh district, where in the more important houses there are generally no gables at all and the whole of the roof is hipped with singularly good effect. This latter style of roof treatment



WEATHER-BOARDED HOUSES, CRANBROOK HIGH STREET.

is also sometimes to be found in the Weald, especially in the oldest houses, but it is not so typical. The little bay windows shown in another illustration are also very frequently seen in the Weald and give just the touch of relief that is helpful, in addition to making a very pleasant feature in the room itself, while the small pent between the ground and the first floor is picturesque and casts a shadow of artistic value.

The tiles are generally plain in the older houses, but in some of the modern or comparatively modern work they are ornamented by having a portion of the lower edge scalloped out in a semicircle, or the tile may have most of its lower edge in the form of a convex semicircle. In a good many cases bands of these ornamental tiles are used with the plain for purposes of decoration, but they detract from the absolute simplicity which is a great part of the charm of the plain tiles, and by looking a little "fussy" they rob the house of much of the restfulness it would otherwise enjoy.

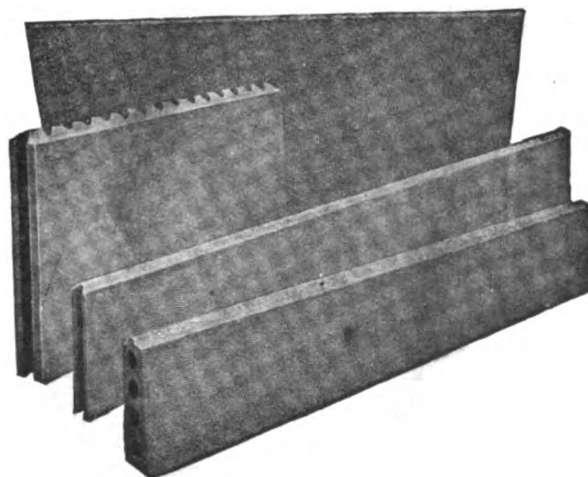
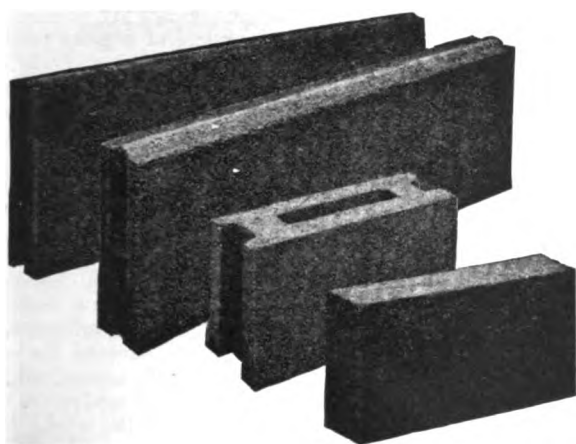
A characteristic of these houses which is worthy of the attention of the architect is the chimneystack. Generally rather tall, it is often extremely picturesque, while quite simple, and the old traditions have been followed, many of the stacks being built on lines originated in Elizabethan days, and, indeed, several of them are of hardly later date, for a great many of the houses are quite old, the tile or weather-boarded fronts being sometimes, I think, a "modernisation," introduced perhaps a century ago to make the houses seem then more up to date. In some houses there are quantities of old oak, and many of them are very quaint inside—not designedly so after the present-day often laboured efforts to achieve that effect, but naturally and spontaneously so because the quaintness arose from primitive ideas, or alterations and additions by builders working on local traditions—in fact, by men working in the vernacular.

It is one of the delights of these old houses, apart from their simplicity, that they seem so spontaneous, so abso-



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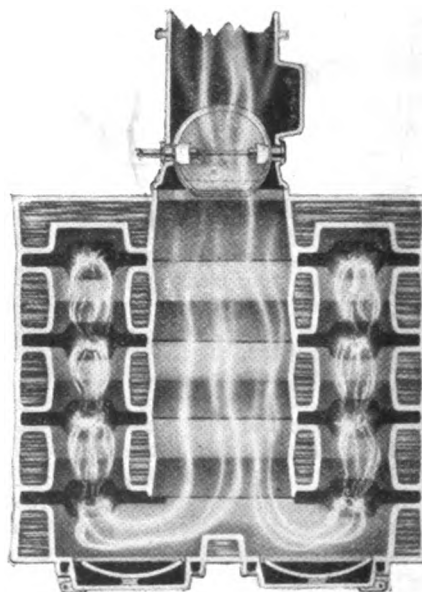
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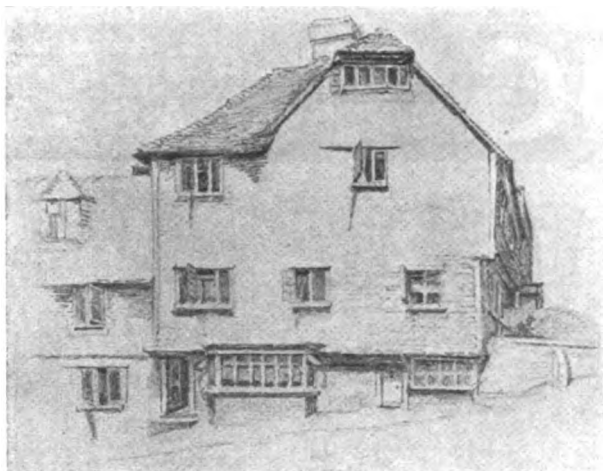
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OLD MANOR HOUSE, GOUDHURST.

lutely natural, and time has added to their attractiveness and mellowed their charms. They do not seem to have been designed or "architected," but rather to have grown of themselves, their builders having adhered in their planning and elevation to the custom of the locality in much the same way that the master builders of the mediæval days worked in the tradition of the times in which they lived.

Such simple elevations would never appeal to those who want their homes to be obviously "pretty" or studiously quaint or picturesque, but they have a homeliness and a simplicity which I believe would commend them to a great number of clients.

Two of the illustrations were drawn from originals in Cranbrook, and they are representative of the locality, except that in one case the hipping of the top gable is on the tiled front of the house instead of, as usual, at either end. Another illustration is of a beautiful seventeenth-century house at Goudhurst, a village a few miles from Cranbrook perched on the top of a big hill. Externally the house is of about the time of Charles the Second or William and Mary, and the chimneystack in the centre is of the same date, but the doorway is of early seventeenth-century style. The house cannot be described as typical of the district, but it affords a very fine model for an architect who wants something more important than the smaller houses shown in the other illustrations. Even here, however, the favourite local material of tiles and weatherboarding is used, and with the same good results. The old Manor House at Goudhurst is thoroughly typical of the locality, the upper portion being of red tile and the lower portion of brick. The roof is of red tiles.

The Secretary of the R.I.B.A. has received the following cablegram from Messrs. Little, Adams and Wood, of Hong Kong: "Kindly select for us energetic, competent, essentially real Architect, businesslike, able to take charge; designer. Essential single, age under thirty, efficiently vouched for professionally and personally. Salary 350 Mexican dollars monthly; yearly increment twenty-five dollars; three years' engagement; free quarters or allowance fifty dollars; free passage; early partnership prospects. Refer selected candidate Pollock, Lloyd's Avenue, for engagement.—Little, Adams and Wood." Any Architect desirous of applying for this post should write at once to the Secretary, Royal Institute of British Architects, 9 Conduit Street, W.1.

The Scottish Board of Health has issued a circular to local authorities relating to the improvement of insanitary housing areas, towards which the Government have agreed to give a grant of £30,000 per annum. It is pointed out that the State contribution will be a limited one, and each local authority will be required to contribute out of the rates the remainder of the cost. The local authority may be required to provide alternative accommodation for persons dispossessed of their houses and to incur considerable capital expenditure in clearing the insanitary areas. The Board desire that such ameliorative measures as are reasonably practicable should be carried out meantime, so that, to the extent of the funds available, the existing conditions might be materially improved. In framing their estimate of the cost of the proposed scheme the local authority is advised to take the opinion of the district valuer as to the value of any existing property proposed to be acquired.

New Books.

"The A B C of Indian Art." By J. F. Blacker. Stanley Paul & Co., 31 Essex Street, Strand. 15s. net.

Mr. Blacker has endeavoured to bring within the scope of a single volume a comprehensive view of the whole of Indian Art, which is a similar and almost as arduous undertaking as to describe the history of Europe in a volume. He has compiled a work full of facts, but its limitations necessarily preclude it from being more than a condensed résumé of a great subject which may be useful to those who consult bigger works on some section of the ground covered in the book. Sixteen chapters are devoted to what may be termed a general review of Indian art and a description of some half-dozen of the more famous Indian cities; thirteen chapters or divisions to a number of small Indian arts, including such subjects as carpets and woven stuffs and jewellery, the last of which contains the sale prices obtained for the Walter L. Behrens Collection, sold in 1914. What the use of this last item is to anyone who wants to study the subject is not at once apparent, but it is clear that the author has fallen a victim to the very common desire of padding out a book in an attempt to make it comprehensive.

It would have been better had the author omitted the very cursory review given of the arts described in the second portion of the book and devoted more space to a clear analysis of the very great subject treated in the first section of the work. But we should advise those who wish to obtain some knowledge of Indian art to have recourse to the excellent works of Mr. Havell, in which he has given a clear and understanding analysis of the artistic side of the civilisation of India, a subject which cannot be adequately covered in a single volume. The numerous illustrations given are, we should think, many of them reproduced from old blocks used elsewhere, and a smaller number of well-produced illustrations would have been both more useful and attractive. But with all its failings the book will be found to be attractive by many, and should it stimulate interest in a great subject it will have served a useful purpose.

Housing News.

The Newcastle City Council has approved of the tender of Messrs. Henry Kelly amounting to £8,900 for the erection of 36 houses in flats of three alternative sizes in Watson Street, Walker, which is at the rate of £247 per flat. It is hoped to have the flats erected in three months.

The Carlisle City Council, with the financial assistance of the Ministry of Health, are about to deal with two slum areas. Of 149 cottages to be erected, 69, with two or three bedrooms each, are to be built at an estimated cost of £318 each.

At the last meeting of the Bradford City Council, upon the minutes of the Street, Drainage, and Works Committee, Alderman Trotter moved an amendment referring back an authorisation to the City Engineer to tender for 50 houses for the Schole-moor housing site, under the Corporation's assisted housing scheme. He thought the Street, Drainage, and Works Committee was already overloaded with work, and he believed the time had arrived when those who were desirous of building in Bradford should have an opportunity of doing so. The amendment was carried by 29 votes to 21.

In the House of Commons recently the Secretary for Scotland was asked at what price he estimated that the ordinary speculative builder could now erect workmen's houses of the standard required under the Government's assisted housing schemes, and what would be the weekly rent payable, exclusive of rates, to give the speculative builder an adequate return on each house built. The Lord Advocate gave the following reply: "Information is not available to show at what price speculative builders can erect houses of the type referred to, but tenders in open competition are now being received by the Scottish Board of Health which indicate that houses of three and four apartments can be contracted for by local authorities at less than £500 and £550 each respectively. My right hon. friend is not prepared to say what weekly rent would be required to give the speculative builder an adequate return, as that must depend upon what the latter considers adequate having regard to the conditions under which he operates in each case."

Mr. W. G. Tarrant informed the Chertsey Rural Council at their last meeting that plans would come before the Council later on for the development of 200 or 300 acres at the southern end of St. George's Hill estate. He was afraid, however, they would not be able to get that ready for the coming winter. When the scheme developed about a mile of extensions of public mains would have to be executed, as well as several miles of extensions on the estate.



AUSTRALIA HOUSE.
A. Marshall Mackenzie & Son, F.F.R.I.B.A.
Architects.

From an original Etching by
Christopher M. Shiner.

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General.

The Society of Architects will be officially represented at the Brussels Architectural Congress by its Honorary Secretary, Mr. L. Sylvester Sullivan, F.S.Arc., A.R.I.B.A.

Mr. William Hayne, J.P., architect, Frinton-on-Sea, has prepared plans for a Baptist church and buildings which it is proposed to erect at a cost of about £15,000 at Clacton.

Messrs. Wallis-Jones & Dent, consulting engineers (Reginald J. Wallis-Jones, O.B.E., M.Inst.C.E., M.I.E.E.), have removed their office from 23 Old Queen Street, S.W.1, to 50 Queen Anne's Gate, Westminster, S.W.1 (i.e. their pre-war address). Telephone 8070 Victoria.

The fine abbey of Lincluden, near Dumfries, is to be taken in hand by the Government, to have its historic ruins put into repair. Ivy and other plants are to be removed and the buildings are to be pointed and cemented. Lincluden is one of the finest ruins in the South of Scotland.

Sompting Church, near Worthing, has developed serious cracks. The most serious is one extending from top to bottom of the tower in the south-west angle. Students of architecture must have a special regard for this Saxon tower, as its Rhenish type of pyramidal roof is unique in England.

The tender of Messrs. Laing and Sons, of Liverpool, amounting to £8,078, has been accepted for the erection of the North Wales Heroes Memorial at Bangor, in connection with the University College of North Wales. This forms only part of the memorial scheme, which includes the erection of science laboratories.

Mr. J. R. Wigfull, A.R.I.B.A., has retired from the honorary secretaryship of the Sheffield, South Yorkshire and District Society of Architects and Surveyors, after a period of not less than seventeen years of service in this capacity. So long a term of office must be nearly, if not quite, a record in the history of the Allied Societies.

The tender of Mr. Thos. Shillitoe, of Islington, N., amounting to £11,000, has been accepted, subject to the approval of the Ministry of Health, for the erection of ten houses (twenty dwellings) on the Diss Street site for the Bethnal Green Borough Council. The architect is Mr. E. C. P. Monson, F.R.I.B.A., F.S.I., of Finsbury Pavement House, Moorgate, E.C.2.

Mr. A. C. Holliday, A.R.I.B.A., has been appointed Civic Adviser to the City of Jerusalem, Palestine. For the past two years he has been Research Fellow and Lecturer in the Department of Civic Design, University of Liverpool, and joint editor of the "Town Planning Review," with Professor Abercrombie. Mr. Holliday is a Bachelor of Architecture, and an associate of the Town Planning Institute.

The will of the late Mr. J. H. Sabin, F.S.I., of Little College Street, Westminster Abbey, S.W., and West Hill, Highgate, N., President of the Surveyors' Institute, senior partner in Messrs. Smith, Gore, and Co., agents for the Estates of the Ecclesiastical Commissioners in the Northern and Midland Counties, and of the Welsh Church Commissioners in North Wales, has been proved at £23,318.

The name of Sir Charles Tamlyn Ruthen, K.B.E., F.R.I.B.A., appears in the list of J.P.'s for Swansea West. His qualifications are thus stated:—"Liberal.—Native of South Shields, prominent local architect, ex-member of Swansea Corporation. In 1917 inspector to the War Cabinet Committee on Accommodation, in 1918 Deputy-Controller of Accommodation in the London area and later Director-General of Housing."

St. Mary's Church, in Lower Harrogate, at one time a fashionable place of worship, is to be demolished. The structure was condemned as being unsafe some years ago, and now the Corporation have passed the plans of Miss M. E. Jones, of the Ladies' College, for a church in the grounds of the college, Clarence Drive, which will mainly be built of the fabric of the old St. Mary's Church. Tenders were recently invited for the work of demolition and building.

The death has occurred with tragic suddenness, in Paris, of Professor H. Crosby Butler, a noted archaeologist, Professor of the History of Architecture at Princeton University, New Jersey. Mr. Butler died at the American Hospital at Neuilly, after being taken ill at a tourist company's office. He had just arrived from excavation work in Sardis, Asia Minor. Professor Butler, who was 50, was a member of many scientific bodies in England, as well as in America, and wrote a long work on Scotland's ruined abbeys. He organised at least two archaeological expeditions to Syria.

Another conference respecting the proposed new Great Western Railway Station at Swansea between the railway officials and the local authorities took place at Paddington. Included in the deputation were the borough surveyor (Mr. Heath) and the borough architect (Mr. E. Morgan). Details of the scheme (which involve the taking over of properties adjacent to the station) were further discussed. Preliminary heads of agreement were prepared, which will be submitted to the Swansea Council.

The cost of the undertaking is estimated at about £290,000, which has already been voted by the directorate.

The cenotaph, which is to be erected in George Square, Glasgow, as the memorial to the men belonging to the city who lost their lives in the war, will be built of granite. This decision was reached at a meeting of the Executive Committee of the Glasgow War Memorial on the 11th inst. Sir John Burnet, A.R.A., R.S.A., whose design, as approved by the Corporation, excludes the open vault which was originally part of the scheme, submitted tenders for the erection of the cenotaph alternatively in granite, in Revelstone freestone and in Blaxter freestone. The offer of Messrs. John Emery & Sons, Glasgow, for the work was accepted.

The Ministry of Health intimated recently to the Huddersfield Town Council that they were prepared to authorise the erection of 32 houses on the Newsome Road site, under the assisted housing scheme, provided the corporation would agree to erect at least a similar number of houses on their own responsibility. The Council decided to accept the Ministry's offer, and the Housing Committee have resolved to erect 24 houses at Hollin Carr, and 11 houses at Dalton, as part of a non-assisted scheme. The Finance Committee had approved a report by the Borough Treasurer in connection with the proposal to erect 162 workmen's dwellings at Dalton, the total estimated cost of which is £81,200.

The Buildings Committee of Upper Renfrewshire has approved of plans of the following new buildings: Ten bungalows, each of five apartments, at Giffnock, for Messrs. George W. Dixon & Sons, Tassie Street, Shawlands, Glasgow; double villa at Craignethan Road, Whitecraigs, for Messrs. Gardner & Glen, architects, 164 Bath Street, Glasgow; three self-contained bungalows at Giffnock, for Messrs. J. & J. Dixon, builders, Kilmarnock Road, Giffnock; and self-contained bungalow at Percy Drive, Giffnock, for Messrs. J. & J. Dixon. The plans of the sanatorium and children's hospital to be erected at Mearns Kirk by the Glasgow Corporation have been submitted to the Buildings Committee.

At the last meeting of the Brynmawr Urban District Council a letter was read from the Unemployment Grants Committee with regard to the sewerage scheme which is being executed by direct labour at a cost of about £30,000. The Committee said that, owing to the unsatisfactory manner in which the work was being carried out, they would have to withdraw the grant originally authorised unless an undertaking was received that the work would be put out on contract. The Council decided to send a deputation to the Ministry of Health pointing out that the work, having been reorganised, was now being carried out in a workmanlike manner, and that as a large proportion had been completed the Council should be allowed to proceed by direct labour.

Aberdeen architects have a dispute with the builders of that city in connection with the housing question. The architects contend that the builders should still further reduce their charges and estimates and thus encourage building in that city. They claim that, while the price of four-roomed houses in Aberdeen has fallen from £1,150 last year to between £750 and £800 now, these latter figures are still £200 dearer than similar houses in course of construction in northern burghs. In some quarters it is alleged that a granite "ring" exists, but this is stoutly denied by the builders, who contend that Aberdeen cannot be compared with any town in the South, because the Aberdeen houses, being of granite, last longer. They state that six-roomed houses are still costing two and a half times the pre-war price, but there are no houses being built just now with anything like the pre-war finish. They also blame the shorter working day, unemployment, workmen's insurance, and taxation for the high cost of building.

The Select Committee, to whom were referred all private Bills promoted by municipal and other local authorities, have issued a special report dealing with the past session of Parliament. Most of the Bills which the Committee considered contained provisions relating to public health, sanitation and other matters. The Committee emphasise the importance of a consolidation and extension of the Public Health Acts so as to include the powers sought under general legislation, the effect of which would prove beneficial to local authorities. Several of the Bills contained clauses compelling owners to provide satisfactory means of escape in case of fire from buildings used as flats, hotels, hospitals, boarding houses and common lodging houses, and as schools, shops and restaurants where sleeping accommodation is intended to be provided. The Committee say they are satisfied after hearing the evidence that the clauses as amended will ensure reasonably adequate protection for the public, and at the same time will not inflict undue burdens upon the owners.

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The Cost of Building.

Everywhere we find great interest taken in the cost of building, an interest which is manifested in numerous letters to the daily Press, the greatest number of which are, very evidently, influenced by the wish which is father to the thought. From among them we have found one contributed to the "Morning Post," which we quote in full, as, in our view, it gives an impartial and well-informed view which, being based on reason and experience, is likely to be a safer guide than the very optimistic opinions which are, we believe, leading many astray. The writer says:—

At a time when the markets for building materials are in a most unsatisfactory condition, both for producer and consumer, owing to the too sudden and rapid slump in values, it may be expedient to consider whether prices may not have touched "bottom" and endeavour to estimate a working basis for building and all constructional work. Such work is of the utmost importance in regard to unemployment, and also to the general trade of the country. For some time past somewhat sensational statements have appeared regarding the cheaper cost of house building. Such statements appear on investigation to be somewhat misleading, inasmuch as the costs of land, sewers, roads, etc., cannot be included in the figures quoted. Then with regard to materials. Take timber. The timber trade was one of the first to suffer by the unprecedented slump, and businesses are now being carried on at a loss. The demand has fallen off, and importing prices are considerably higher than "spot" market prices, while, curiously enough, Continental buyers are paying even more than shippers are willing to pay for the (English) market. The timber trade has to pay its quota of taxes, is a heavy trade to handle financially, and cannot continue to live on the present impoverished state of profit, or, rather, state of loss.

As to bricks, of which the housing schemes demanded priority of supply, since the "Housing" curtailment they have been sold at a loss, and in future can only be manufactured at a more profitable figure. Labour, indeed, is at a lower wage—perhaps one might say as low as it is judicious to expect, save for a possible increase in working hours—but taking an all-round view of building costs, and allowing each trade a fair margin of profit after provision for taxes, bad debts, insurances, etc., has been made, we find that careful estimates work out at approximately double pre-war levels. This, in the opinion of careful, experienced, and successful traders, is really the "safe" basis to take for building costs—probably for some years to come. Now as to the demand for building work. It will take some years for the supply to catch up the demand. There seems small doubt that at last trade, all round, is beginning to move, and therefore some advance in values of building materials may confidently be looked for, which would at once affect the cost of house building. With money at a low rate, therefore, house owners and house builders might well push on with their plans with the reasonable assurance that costs have touched the lowest, and will shortly advance.

We believe this careful and well-written letter expresses the facts, and would make but two criticisms, the first being that, though certain goods may advance in price, the general level of prices is nearly stabilised, and advances in some directions are likely to be counterbalanced by reductions in others; the other doubtful element which would send prices sharply up would be the introduction of another Government Housing Scheme, which has been talked about in some quarters, and is said to be impending. We hope that, forewarned by former errors and chastened by experience, the authorities will do nothing so ill-judged; but still it is possible that they may do so. What is needed to promote confidence and create security is the definite announcement that, apart from the clearance of slums

in the interests of public health, no building schemes other than those of a remunerative nature will be brought forward either by the State or by municipalities, coupled by the repeal of the Rent Restriction Act.

Though such a repeal would hit a number of existing tenants, it would undoubtedly be to the interest of tenants as a whole, since it would do away with the hesitancy which makes the speculator abstain from building, this abstention creating the scarcity deplored and automatically keeping up the rents of existing accommodation. An inducement which might well be offered is to relieve those who build small house property for a term of years from the incidence of rating. It is in these directions that the provision of housing can be stimulated; whereas the opposite policy, which is penalising speculators by depriving them of their legitimate profits and exposing them to State competition, has been the one which has been tried for years and found to be a failure. It discourages what must always be the greatest provider of housing in favour of a system which can never replace the speculators; nor should it be forgotten that the world has found out and generally realised that we have to pay more for everything we want than we did before the war, and that it is absurd to believe that the building industry can remain unaffected by causes which universally apply to the provision of all other commodities. Hardly any of the materials used in building are produced without labour, while carriage and handling, which must be paid for at enhanced rates, are involved, and heavier taxation has to be provided, directly or indirectly, by everyone in the country, and these reasons absolutely preclude the possibility of any return to pre-war prices or prices which are only slightly higher. We have to bear in mind—as many forget to do—that taxation does not fall alone on those who directly pay it, but diminishes what they can spend in employment, while it forces up prices to provide for a greater margin over expenditure. The working man is thus almost as much affected by the incidence of the income tax as the wealthy manufacturer, and is as much benefited by economical administration.

We are afraid that the average man in matters of building has a tendency to imagine that somewhere or other he can find a "bargain counter" where he can obtain building below cost price; but the only approach to this is the tender in which a builder has wrongly priced some item or other. Unfortunately for most people, the contractor who miscalculates costs is often in other ways unreliable, and is seldom in the strong financial position which makes for the successful carrying out of a contract. Unless we believe that the whole of the costs of living are going to fall in the near future, we see no reason why the public should expect those of a special trade to be greatly lessened; and we believe, with the correspondent of the "Morning Post," that prices are so nearly stable that there is little reason for anyone to delay building unless they are in a position in which they can afford to wait for five to ten years.



WALLASEY TOWN HALL, RIVER FRONTAGE. Messrs. BRIGGS, WOLSTENHOLME & THORNELY, Architects.

Our Illustrations.

THE IONIAN BANK, SALONICA. THOMAS H. MAWSON & SONS, Architects.

Drawings made by GEORGE BASEVI, on THE GRAND TOUR.

NEW TOWN HALL, WALLASEY. BRIGGS, WOLSTENHOLME & THORNELY, Architects.

A design for this building was selected in open competition by Sir William Emerson as far back as 1904, the successful architects being Messrs. Briggs, Wolstenholme & Thornely, of Liverpool. By the time the scheme had become a practical proposition the Wallasey Urban District Council had developed into a county borough. To meet these altered conditions, the

architects were instructed to prepare new designs. In March, 1914, the foundation-stone was laid by H.M. King George V. The contract was let to Messrs. Moss & Sons, of Loughborough. Two years later, before the work was completed, the building was offered to, and accepted by, the War Office for use as a hospital of about 350 beds for sick and wounded soldiers.



WALLASEY TOWN HALL, ENTRANCE HALL. Messrs. BRIGGS, WOLSTENHOLME & THORNELY, Architects.

The new Town Hall has been erected on what is known as the North Mead site, with frontages to the Promenade, Brighton Street and Queen's Road. The site, containing an area of over 2 acres, is midway between the Seacombe and Egremont Ferries, and forms an elevated plateau some 36 feet above the Promenade.

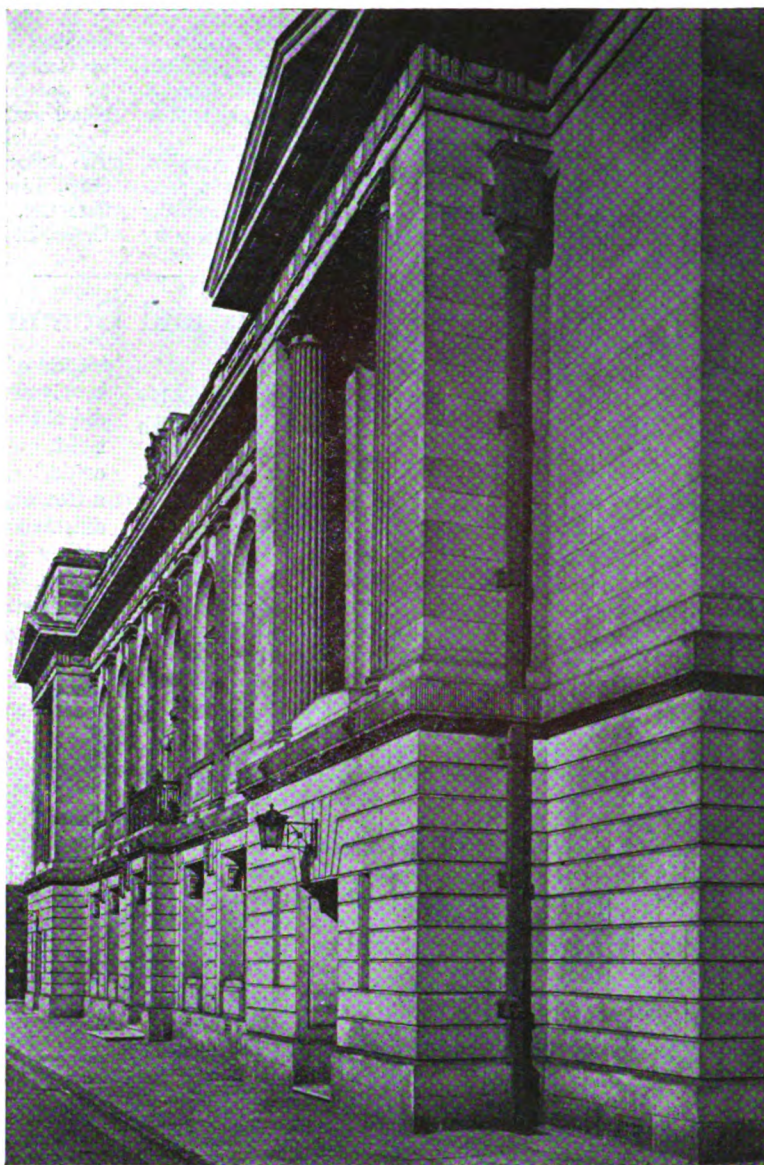
The building is set back about 140 feet from the Promenade, and is approached from the latter by a series of wide steps, with terraces and grass banks. On the Brighton Street frontage, where the principal entrance is placed, a square is formed which is laid out with two large grass plots with footpaths and carriage drives around same. The frontage to Queen's Road has been well set back from the street, giving ample space all round the building.

The building has frontages of 156 feet to Brighton Street and the Promenade, and 176 feet to Queen's Road and the south side.

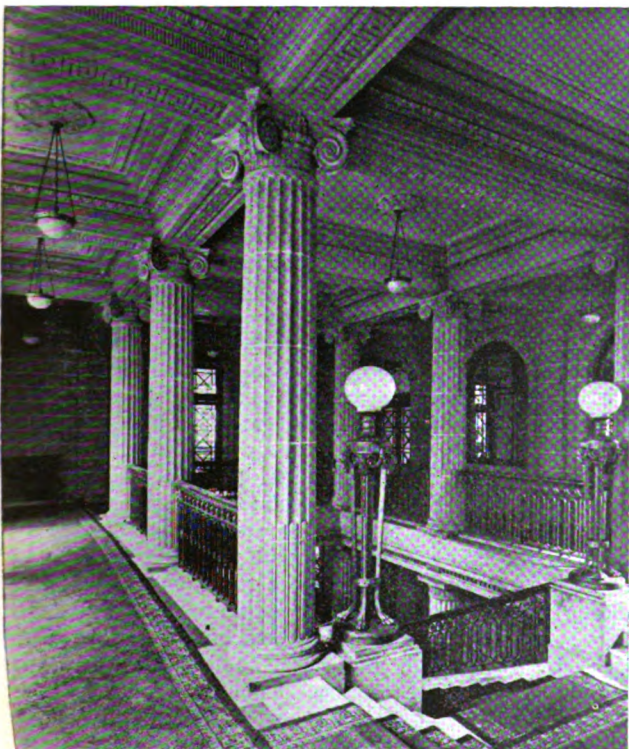
The Council kept in mind not only the present needs of the district, but also the probable needs of the future. The building has accordingly been planned with a considerable amount of spare accommodation. It has also been arranged that an additional story can be added on the north, south, and east fronts without in any way detracting from the appearance of the building.

The main entrance gives direct access to the Treasurer's Department to the right, and leads, by means of a wide-vaulted corridor, to the principal staircase hall, from the centre of which rises the grand staircase. The large Public Hall, accommodating about 1,200 persons, occupies the whole of this frontage on the first-floor level. It is 87 feet long by 50 feet wide by 36 feet high, opening out at the gallery level to a length of 126 feet. The ceiling is an elliptical barrel vault, which is richly panelled and decorated in fibrous plaster. The walls are panelled in oak to window-sill height. The Council Chamber, which is likewise approached from the grand staircase, occupies a central position on the river frontage. It is reached through an ante-room. The chamber is a fine apartment, 50 feet long by 34 feet wide by 24 feet high, and is capable of seating 60 councillors.

The building throughout is in the Renaissance style. Towards the river front a massive tower, 34 feet square, rises 180 feet above the Promenade. On its four corners groups of statuary are placed representing Peace, Courage, Prudence and Industry. These are carved in stone, and are the work



WALLASEY TOWN HALL. BRIGHTON STREET FAÇADE.
Messrs. BRIGGS, WOLSTENHOLME & THORNELY, Architects.



WALLASEY TOWN HALL, PRINCIPAL STAIRCASE.
Messrs. BRIGGS, WOLSTENHOLME & THORNELY, Architects.

of Mr. Bernie Rhind, R.S.A. The facing of the entire Town Hall is in white Stancliffe stone from Derbyshire.

All the marble work was executed by John Stubbs & Sons, 272 Crown Street, Liverpool. The marble floor is panelled out in black, white and self-coloured grey marble. The tiling is in ivory and French grey enrichments; marble divisions to lavatories in bleu tonquin; terrazzo to floors and corridors being worked with border and finished against a coved tile skirting.

Messrs. Saunders & Taylor, Ltd., engineers, 43 Lower Mosley Street, Manchester, fitted the heating and ventilating plant. They have also recently completed similar work in the Trocadero Picture Theatre, Liverpool, and the Piccadilly Theatre in Manchester.

Messrs. Chesters, electrical and mechanical engineers, 139 Victoria Road, New Brighton, installed the electric lighting and supplied the fittings. This firm have carried out very considerable contracts for the Wallasey Corporation.

The structural steelwork, which was manufactured by the firm of John Booth & Sons, Bolton, plays a most important part in strengthening and supporting the building. In the main entrance hall steel compound stanchions are encased in the marble pillars, and, with the girders attached to them, form a steel skeleton for this part of the building, extending upwards into the tower. A similar construction is employed to carry the tower, massive plate girders at the fifth-floor level, forming a seating for the masonry. Each floor is constructed in rolled steel girders, which take a bearing on the walls, and the staircases are also carried by cranked steel rakers.

Messrs. Marsh Jones & Cribb, Ltd., of 48 Boar Lane, Leeds, carried out considerable work for the offices for the health department on the ground floor, comprising the supplying and fitting of oak panelled screens, fitments, and desks. The same also for the town clerk's department on the first floor, and laid to those rooms some very fine seamless Axminster carpets.

Also, the oak seating to the assembly hall on the first floor and the gallery, as well as movable four-leaf screens stamped with gilt borders. For the reception rooms, anté rooms, principal staircases, Mayor's room and Committee rooms, Marsh Jones & Cribb supplied hand-made carpets of a special design, as well as carpeting the Council chamber itself throughout.

Messrs. Moss & Sons, Ltd., Loughborough and Liverpool, were the general contractors; they were also responsible for the general fireproof construction and the joinery in the Assembly Hall and Council Chamber. The furniture in the latter was by

J. P. White & Sons, Bedford. Messrs. Waygood-Otis, Ltd., supplied and fitted the lifts. Casements were manufactured by George Wragge, Ltd., Salford, Manchester. Door furniture by James Gibbons, Ltd., Wolverhampton. The ornamental metal work was executed by Walter Macfarlane & Co., Glasgow. Derbyshire stone was supplied by Messrs. White, of Stancliffe. The decorative plaster work was executed by John Tanner & Sons, Liverpool. Safes and strong room fittings by Milners Safe Co., Ltd., Liverpool. The sanitary fittings by Oates & Green, Ltd., Halifax.

Notes and Comments.

The Word "Art."

"The American Magazine of Art," in an article under the above heading, says some very true things from which we may usefully quote the following passage:—

"Art is not something tangible, to be labelled, pigeonholed, catalogued, or to be pasted upon something as a designation. It enters into all design, if the design be good, but it is a means to an end. It is infinitely personal. It cannot be mechanical. A bed, a chair, an automobile can and should be artistically designed, but even so do not become works of art unless perchance created by an artist who is a skilled craftsman. The element of art through design enters into all or almost all industrial products, but even so does not constitute the sum total of art itself, which is bigger and broader and more significant. The art of Rembrandt, Titian, Velasquez, gave to the world some of the greatest masterpieces of painting; the art of Phidias made the sculptures of the Parthenon possible; to the art of the builders of the Middle Ages we owe the magnificent cathedrals of Europe. Art of this order is ennobling, inspiring, enriching. By it nations as well as individuals find in history lasting honour and remembrance. To use the word carelessly, loosely, inappropriately, is to change its meaning, to rob it of its real significance, to belittle it in the minds of the people and in their esteem. Let those who know better help to stem the tide of custom before it is too late, or a new word will have to be found to take the place of that which, like the traveller of old, has 'fallen among thieves.'"

This seems to be very much to the point and worthy of record.

Criticism or Abuse?

A person named Mencken has been among us and has been criticising our architecture, with the result that he has expressed a wish that an architect a week should be hanged.

He objects to prohibition, and we might be justified in thinking that he has been revelling in the delights of comparative freedom after the enjoyment of which he has exercised his critical faculties—such as they are. Mr. Mencken may be a descendant of the Pilgrim Fathers or, on the other hand, a recent exile from the Fatherland, but in either case he does not seem to realise the difference between criticism and abuse. It sometimes seems unfortunate that newspapers have little spaces which must be filled, otherwise the opinions of such people as Mr. Mencken would be passed over in the silence they deserve. Good criticism is always useful, and there is plenty of opportunity for it, though we should remember that not everyone who builds has the opportunity of creating a masterpiece, and that our efforts are sometimes "cribb'd, cabined, and confined" by circumstance.

When we say good criticism is always useful we may perhaps add that too much of it is apt to make the recipient so self-conscious that he is not in the most favourable vein for giving us his best.

The Disposals Board.

Messrs. Rownson, Drew and Clydesdale, engineers and engineers' and builders' merchants, have made some strong statements about the methods of the Disposals Board, and the manner in which public money is wasted through mismanagement. We cannot say that we are surprised, for these revelations are made with more or less cause wherever the administration of a Government Department is concerned. We remember the procedure of a very irate and autocratic old gentleman with respect to some offices he was having built. He told us: "My architect used to come to me from time to time, saying he had found means to

improve his scheme, and I always asked if the improvement involved an extra, and if he said 'yes!' I told him that I did not want to look at it." We do not say our friend was right, but we believe if we were told that great improvements could be made we should be right in asking "does it involve a Government Department," and, if the answer were in the affirmative, we should be justified in saying we would rather go without the improvement. Departmental stupidity, departmental injustice, and departmental maladministration are all answerable in no small measure for high taxation and many of the evils we suffer from.

The Hampstead Garden Suburb.

Garden suburbs have possibly been over-advertised, and their merits so strongly upheld by enthusiasts that we have become tired of the expression, while we have regarded their inhabitants and devotees as belonging to the genus crank. But, familiar as we were with the main features of the Hampstead Garden Suburb, we were surprised on a recent visit to discover how successful its designers have been in making a semi-urban site beautiful. Now that the rawness of new building has disappeared and gardens exist in actuality as well as on paper, all will admit the success of the experiment. Go where we may in the suburb, one has pleasant vistas, well-thought-out centres of interest, and pleasing variety. The individual buildings may be, and sometimes are, commonplace, but their arrangement and grouping has been so well considered that all merges into a pleasing and complete whole. Mr. Unwin may well feel proud of his child, for he has performed a service to the community greater than that of many designers of our finest buildings in showing how the commonplace and everyday wants of men can be arranged so as to give pleasure to all who have æsthetic sense.

A Soi-Disant Elizabethan Church.

The Secretary of the Society for the Protection of Ancient Buildings writes to "The Times" to protest against the decision which has been come to to demolish the lath and plaster church at Hazeleigh, near Maldon, in Essex, because it has become unsafe and ruinous. The church is remote from the village and has long been disused, except for funerals. We quite agree with Mr. Powys that it would be wrong if a decision of this nature can be arrived at by a parochial Church Council without time being given for an appeal or examination by some competent person, but the Diocesan Advisory Committee of Chelmsford were consulted, and presumably did obtain competent professional advice. Demolition is said to have actually begun, so that probably nothing can now be done. Whether anything could have been done is another matter, and, though it is true that Elizabethan churches are rare, the crux of the position is really this: Here is a church placed in such a position that it has become disused; it is in such a structural condition that expense is required if it is to be saved. If it is preserved are there any uses to which it could be put, or is it of such merit that its retention as a disused building would be justified and appreciated by the general public? All these questions are part of the broader issue which Mr. Powys does not raise, but which seem to us determining factors in the case. Though the photographs we have seen are interesting, they do not show work of any great merit or of unusual quality, and we should be inclined to answer the two questions we have asked in the negative while regretting the removal of an old landmark.

The World of Art.

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Although most of the London Galleries are now taking their summer holidays, and London itself seems abandoned to provincial visitors and to the return wave of Americans who have been around Europe, and are now besieging the American Express Company for their accumulated "mail," and the steamship companies' offices, while Piccadilly Circus, with the pavement up, presents a scene of desolation, there are two of the summer exhibitions which are worth mention. The first of these is at the Twenty-One Gallery, where the material is always well selected. In the present exhibition of paintings Bonamici comes forward with work in which—for instance his "Rocks, the Two Brothers," and "Fishing Boats," both at Martigues—there is good colour and drawing, though the "impasto" of colour used by this painter is so heavy that in his study of "The Wall" the solid colour is standing right out from the canvas. Blampied is here in his admirable "Jersey Vraic Farmers," and beside him H. Bishop, Stewart Wood, Brangwyn—in a little study of "Gipsies," very rich in colour—and A. S. Hartrick, whose female figure in "The Bath Kimono" would seem to have come better in water colour than, as here, in oils.

Beside these oil paintings there is an attractive selection of engravings and etchings, beginning with the "Melancholia" (signed and dated 1602) and the "Adam and Eve," both engraved by Jan Wierix after Albrecht Dürer, and continuing through Canaletto's etching of "The Pilgrim" to Alexander Walker, Ravenhill's clean direct etched work ("Clapham Common" and "The Gangway"), F. L. Griggs ("Maur's Farm," in two states of the plate) and Frank Brangwyn ("The Beggars" and other plates).

At Gieves Gallery in Old Bond Street the summer exhibition includes a number of water-colours by W. Alistair Macdonald, mostly of Italian scenes, among which some of the best are his "Bay of Naples," his study of the façade of S. Maria Novella at Florence (which, by-the-by, owed its design to that great Renaissance architect Leo Battista Alberti) and "Sospello." There are some good flower paintings here, notably four studies by Eva Savory against a dark background, among which I liked best her "Colour Delights," showing sweet-william and other flowers, and the "Stock"; near these is a clever study of "Hydrangeas," by H. H. Belmer, whose landscape work here, especially his two studies of "Westmoreland," deserves a word of praise for its clean colour and good technique. I understand that Miss Eva Savory has arranged for a special exhibition of her work at these Galleries in the early months of next year. There is a little group of miniatures here, among which I enjoyed Anna Underwood's head of a little girl, and the delightful little nude called "The Bather," in which Mr. Lindley shows good drawing of the figure and cool fresh colour. The painting of Venice by L. Meyer is loose in handling and attractive.

At Messrs. Bromhead and Cutts Galleries in Cork Street, Burlington Gardens, an interesting exhibition is being arranged for October next of the sculpture of Mr. F. La Monaca. This artist is a native of southern Italy, having been born at Catanzaro in 1882. He studied in Rome and Paris, working in the latter city under Professor Thomas at the Ecole Nationale des Beaux Arts; and, in fact, has been domiciled in Paris for some twenty-five years. Visiting the United States in 1921, he made a number of portraits in bronze on that side; and since he came, about seven months ago, to England has had numerous commissions for portraits, in bronze or marble, including, among dignitaries of the Church of England, the Archbishop of Canterbury, the Bishop of Birmingham and Dean Inge; among writers, Sir Martin Conway, Sir Rider Haggard, and Mr. G. Bernard Shaw; in the political world, Sir Donald Maclean, Mr. T. P. O'Connor and Sir Worthington Evans; and in that of the Stage, Miss Sybil Thorndike. I understand that this sculptor has reason to hope to include among his sitters H.R.H. the Prince of Wales before his exhibition is opened.

The death of Sir Thomas Brock, R.A., which occurred last week, removes a very distinguished sculptor from our midst. Sir Thomas Brock sent two portrait busts this year, one of which was a very interesting likeness of the President. His most important commission—and the one by which he will probably be remembered—is the group of the Queen Victoria Memorial in front of Buckingham Palace. While I should hesitate to describe this as an entire artistic success, the monument, in my judgment, possesses great merits, both in the general design and spacing, and notably in the lower portions—the sweep of the basins and the delightful relief of Tritons and Sea-nymphs emergent from the waves. The water, which was part of the effect achieved, should not be left empty—as it too often has been—but filled and clean.

Sir Thomas—like another distinguished Academician, Mr. B. W. Leader, R.A.—was a Worcestershire man, having been born near Worcester in 1847. The tradition of art was in his family, and entering the Royal Academy schools, he won, in 1869, the gold medal with his "Hercules Strangling Antaeus." He became an Associate in 1883, and a full Academician eight years later. Any mention of his work should include the fine portrait figure of Sir Henry Irving, which stands at the back of the National Portrait Gallery, and that of Thomas Gainsborough, now in the National Gallery of British Art. This artist was created a K.C.B., in 1911, in recognition of his work upon the Victoria Memorial, which, with Alfred Gilbert's Piccadilly fountain, were probably the two leading London sculpture commissions of our time.

I hear good accounts of the Toronto exhibition, which opens in this month, and will include this year, among other features, a section of modern Spanish art, both painting and sculpture, in which I have been able to give some assistance to Mr. Rimbault Dibdin, the European representative of this now very important annual exhibition; while most invaluable help in this section has been rendered by Señor Ignazio Pinazo, the clever Spanish sculptor, who acted as Secretary in the recent exhibition of Spanish Art at Burlington House. S. B.

"The Architect" Fifty Years Ago.

AUGUST 31, 1872.

"SQUANDERING RATEPAYERS' MONEY."

SIR,—At a meeting of the London School Board, held to-day, it was decided "to appoint to the architects' department" "six efficient assistant draughtsmen, at a salary not exceeding £120 per year." You are aware that an "assistant draughtsman" in an architect's office has to maintain the appearance of a gentleman, and in most instances has received an expensive education to prepare him for such a position. It is an insult to offer him a remuneration barely equal to that of the mechanic who is subsequently to lay the bricks of the building upon the designs of which the underpaid "assistant draughtsman" has expended his skilled and artistic labour.

The whole of the recent architectural appointments of the London School Board seem to indicate that it is the intention of that body to imitate the Office of Works in their treatment of the profession. They will have obtained, by a more or less fair competition, the plans and designs of some of the best architects in England, and they evidently think it will not be difficult to obtain the services of some smart young fellows, who, under the guidance of the able architect to the Board, would be able to modify existing designs, and save the expense of architect's commission.

If I am right in my surmise, it would not be easy to find adjectives of sufficient force to characterise the conduct of the London School Board.

Yours,

August 28, 1872.

AN ASSISTANT DRAUGHTSMAN.

The Greasborough Urban Council received three tenders for building eight Type A houses to complete the Scrooby Street and Firth Street site, viz., £413 2s. 6d., £410 and £380 per house, the lowest tender (with a refund of 50 per cent., should any saving be effected during erection) being from the National Building Guild, Ltd., Manchester. This was accepted, subject to the sanction of the Ministry of Health. The Council accepted a tender in April last for the same type of house at £459 each.

Modern Methods in Building Construction.—XXXI.

By Albert Lakeman, M.S.A., M.C.I.

FORM WORK.

The form work required in the execution of concrete work affords considerable scope for ingenuity, and the modern developments have been extensive owing to the large increase in the use of concrete for all purposes. The most important feature of these developments is that in connection with steel forms of various types, which eliminate a considerable amount of labour on the site, and furthermore avoid the waste that is inevitable when timber is employed. The form work must meet certain conditions in order to give satisfaction, and these may be summarised as follows:—(a) it must be sufficiently rigid to withstand the weight or pressure of the wet concrete without distortion, (b) it must be capable of speedy erection, (c) removal without damage to the green concrete must be easily accomplished, (d) it must be suitable for re-use on several occasions, the number of times being proportional to the initial outlay, (e) the inside of the form should be free from obstructions, (f) the weight should be as small as possible consistent with rigidity, and (g) the cost must be reasonable. These conditions may appear rather elaborate when applied to work which is for temporary use only during the execution of the permanent structure; but, although the forms are only a means to the end, and not the end itself, the latter will be seriously affected if the conditions imposed are not complied with. It is also essential that some of the conditions be met solely because the work is of a temporary nature only, and the value of the work is therefore limited.

The necessity for sufficient rigidity will not be questioned by anyone possessing a knowledge of the functions of the form work, but proper allowance is not always made for the pressure which is exerted at the base of a deep form when filled with material in a liquid condition. Some of the patent methods on the market to-day are lacking in rigidity, and the only explanation possible for such an obvious defect is that the anxiety to produce a type which is inexpensive and light exceeds the desire to supply a form having the requisite strength and stiffness. Speedy erection is essential owing to the necessity of building up the form work in advance of the actual concreting, with a margin to allow for the placing of reinforcement, while the time available for the erection is sometimes limited, owing to the need of concreting some portion of the work before the form work for another section can be commenced. The removal of the forms without damage to the green concrete is an important matter, and, as the ease of removal will be dependent on the method of building up, this point must be carefully thought out at the commencement. The use of wedges and clamps capable of being withdrawn are necessary, and bolts and screws are preferable to spikes and nails. In the erection of wooden form work in the early days of concrete structures the importance of easy removal was not always realised, and nails were often used extensively, with the result that

labour was wasted and damage was caused when the removal was carried out.

The universal clamp, consisting of a light steel wire with adjustable collars at each end, kept in position by set screws, is used on a large scale in America, and it is one of the best types of fastening that can be used. The wire or rod is passed through the two pieces of timber to be joined either with or without a distance block, and the collars are pushed up to the woodwork on the outside and secured by the set screw. When the forms are removed the set screws are undone, the collars are removed, and the wire can be withdrawn. No hammers or crowbars are required, and the risk of damage to the concrete is practically nil. These clamps can be used repeatedly, and will prove economical in the end. A typical example of some form work for a fairly high wall wherein the forms on the two faces were tied with this type of clamp is shown in fig. 162.

The necessity for using forms which can be re-used several times will be apparent, because the initial cost must be spread over a considerable quantity of concrete work to avoid making the latter too costly. In the case of timber forms the work must be made up in convenient size sections for the purpose of handling and transportation from one point to another, while form work for beam and slab construction must be designed to allow the slab forms and the beam sides to be removed without disturbing the form at the bottom of the beam. The re-use of the forms is one of the principal points to be considered from the economical aspect, and the amount of re-use will be dependent on the material employed, the ease of removal without damage, and the type of work being executed. When metal forms are adopted the number of times they can be used is indefinite, as proper handling, care in cleaning, and good protection when not in use will result in practically no deterioration, and the forms can therefore be used for numerous schemes extending over a long period. The initial outlay for any special shapes will, of course, be comparatively heavy, and may not always be justified, but for any general type of work on a large scale the metal form

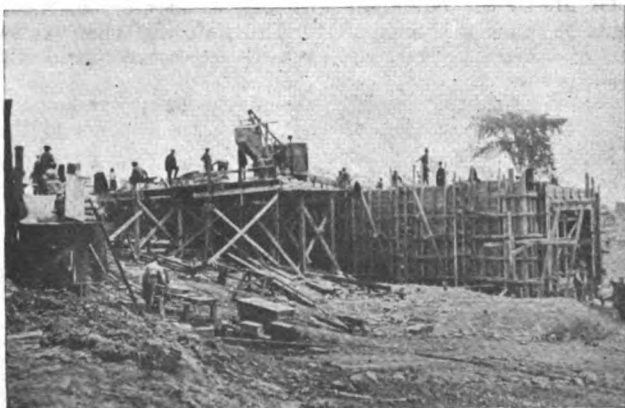


Fig. 162.—TYPICAL FORM WORK FOR CONCRETE WALL.

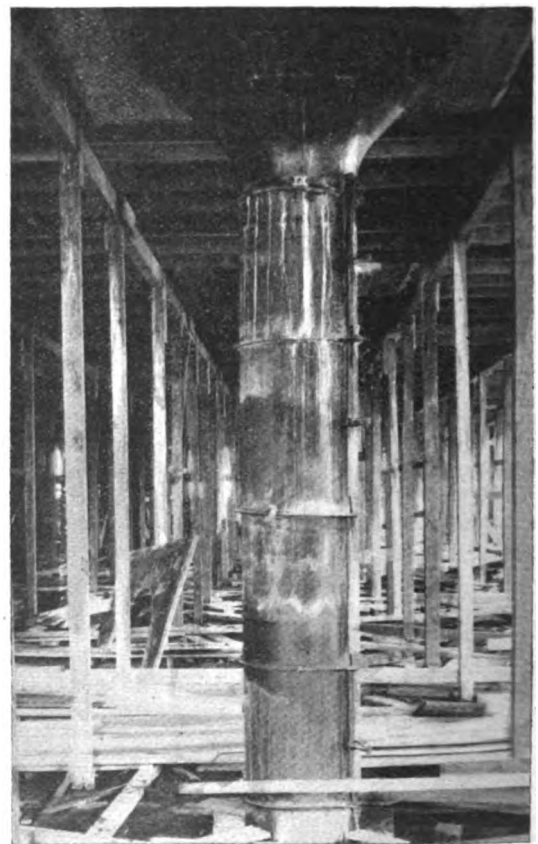


Fig. 163.—METAL FORM FOR COLUMNS.

will probably be very economical. Other advantages of metal are (a) there is no swelling or change of shape when moisture is applied, as with timber, and (b) the surface produced is generally cleaner and smoother when the work is to be left unplastered. In America reinforced concrete work is more standardised than it is in this country, and consequently metal forms are more general, particularly for circular columns with mushroom heads and other work involving shapes which would be expensive to make in timber. The flat slab, with mushroom-headed columns, which is the system extensively employed in America, is not generally sanctioned in this country owing to our conservatism, and, in consequence, the most simple type for standardisation is not available. Owing, however, to the extensive use in America a very general practice is to execute the whole of the flat form work for the slabs with timber and employ metal form work for the column and head, as shown in fig. 163. These forms are not purchased by the contractor, but hired for a scheme when required, and they are easily assembled and removed owing to the fixing being achieved with patent metal bands and wedges. The head form is made in sections, which are connected by small bolts and nuts, and these are readily built up in position. Forms for various diameters can be obtained, and the height can be adjusted by slightly varying the overlap between two vertical sections of the shaft. The hiring charge is made as a lump sum price for the scheme, wherein a reasonable number of times of re-use is arranged, and, while a maximum period of time is generally agreed for the duration of the scheme, the hire is not paid for on a time basis. In this manner a contractor knows at the outset what the actual cost of the forms will be, and he can be certain that his allowance for this work in his contract will not be exceeded.

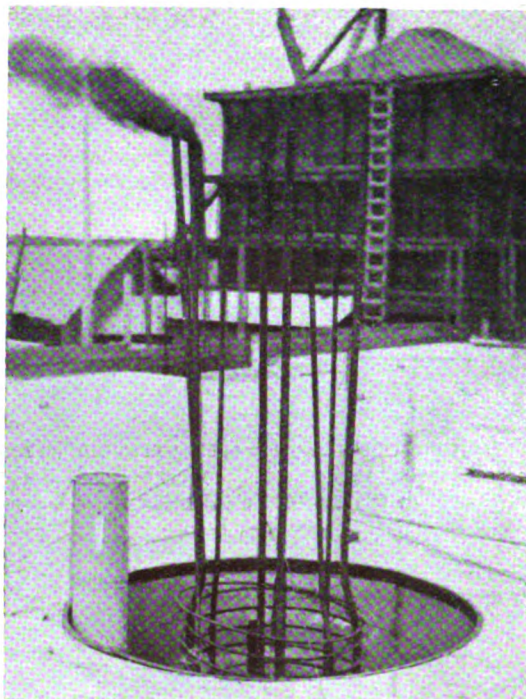


Fig. 165.—FORMS BEFORE PLACING CONCRETE.

of them amounting to fractions of inches, because the designer is not limited to any particular section. This freedom, while beneficial in many respects, is a great factor in preventing the manufacture of standard forms, because the use of such forms would be limited.

In the case of wooden forms the re-use will be limited according to the nature of the work and the way in which the form is made. It may be unsatisfactory to use the same form more than three times in some work, while in others it may be re-used a dozen times. The most general practice is to make enough form work to allow the concreting operations to proceed continuously without the removal for re-use before the concrete is sufficiently hard, and carry on with these forms until they become defective and beyond repair, when they are replaced with new from time to time as required. In this way some portions of the form work will be used a greater number of times than others, and it is the average number which must be taken in arriving at the cost per unit of area of work executed. An arrangement for handling wooden forms for re-use when the sections are larger is shown in fig. 166, this depicting the work in connection with a reinforced concrete box-shaped culvert. The handling was simplified by the use of the light, portable hand-operated derrick known as a "nigger-head," which lifted the forms from flat bottom waggons on a narrow-gauge track parallel with the work directly into the position required.

If the sections are made very large in timber construction they become unwieldy and difficult to handle, and are thus subject to more damage during removal, which reduces their life to the minimum. Again, each section in itself must be sufficiently rigid to stand rough usage when taken out of position in order to avoid distortion, which will prevent it being re-used satisfactorily. Generally speaking the average number of times that wooden forms can be re-used will be about five, and the initial cost of making must be considered in connection with the ratio.

The need for the inside of the form being free from obstructions is very apparent, because the reinforcement must be placed in position easily, and no wooden blocks, struts or other members can be permitted on the concrete after it is cast. If distance blocks between any two parts of a form on the inside are absolutely necessary for spacing and rigidity they must be made of concrete which is pre-cast to the size and shape required, with a small hole through the centre for the passage of the rod portion of a universal clamp. The weight of the forms must be kept down as much as possible consistent with rigidity to give the mini-



Fig. 164.—COLUMNS AFTER REMOVAL OF FORMS.

A typical example of some columns cast in these metal forms is shown in fig. 164, and the only marks on the surface are those caused at the joints between the sections. These columns were rubbed over at the joints after the forms were taken away, and the marks were practically removed, while the surface generally was excellent. An illustration of form work in position before the placing of the concrete is given in fig. 165, where the metal portion at the head of a column can be seen. It will also be noticed that thin metal sleeves were employed for providing holes through which pipes could be passed after the concrete was executed, and in this instance the hole was required right through the column head for a rain-water pipe which ran down against the column shaft through the several floors. The standardisation of concrete work which would enable the contractor to hire metal forms on reasonable terms would be a great benefit, as much time and labour would be saved, and there is no doubt that future developments will be largely in this direction. Steel construction has been standardised for many years because it was not practical to roll special sections for every span and load, and the designer must adopt the nearest standard section which complies with the calculated requirements, but in reinforced concrete work all kinds of variations are made, some



Fig. 166.—HANDLING WOODEN FORMS.

mum labour in handling and reduce the dead weight of the temporary construction that has to be carried. The last condition given was that the cost must be reasonable, and as concrete construction has to compete with other types of work the necessity for economical form work is a very real one, because the total cost of the finished concrete work will be considerably affected by the outlay made in the temporary construction during execution.

The design of a wooden form must be as simple as possible, and be based on practical standard sizes of timber which can be adopted without wasteful cutting, while the type that requires intricate fitting should be avoided, as the work is really rough carpenter's work, and must be treated as such if the cost is to be kept down to a reasonable limit.

An example of timber form work on a large scale is shown in fig. 167, where the scheme involved the construction of an immense warehouse in reinforced concrete. These forms were made up when the work commenced at the ground level and they were re-used for the upper floors and the roof construction without the necessity of any replacements and practically no repairs. The timbers used were of a light section and the uprights were stiffened by intermediate horizontal members, which also served the purpose of a working platform during the erection of the flat shuttering for the floor concrete. This flat shuttering was made up with light boards on battens in complete sections, which were easily handled, and these were laid on the bearers without any nailing or fixing. The bearers were arranged with wedges to permit easy withdrawal, and when the bearers were taken down the sectional boarding was quickly removed. In order to avoid any delay in proceeding with the erection of the form work it was necessary to commence work over the newly-concreted floors as soon as possible after the final set had taken place, and some



Fig. 167.—EXAMPLE OF TIMBER FORM WORK.

protection of the surface was essential. After about 24 hours, therefore, a layer of sawdust at least one inch thick was spread over the whole surface, and on this the sill plates provided under the vertical struts were laid and the work of erection proceeded. This sawdust not only acted as a cushion between the sill plates and the green concrete, but it was wetted thoroughly and thus protected the finished surface from the sun's rays, which were powerful, as the work was carried out in the summer. Also any cement or concrete which was spilt or dropped from above was caught on the sawdust, and the necessity for cleaning off at a later date was obviated. This sawdust covering can be seen in the foreground of the illustration (fig. 167), while the various other stages of the work are also depicted. In the background the concreting of the next floor above is shown following along behind the form work erection, while in the centre the placing of the concrete and the finishing of the surface are also proceeding.

This building was constructed by working from the two ends toward the centre and the operations were carried on by two gangs, which were competing to reach the centre line first, while the different trades were so organised that it was necessary for each section to maintain a good output and speed in order to keep ahead of the men following on behind. The erection of this structure, which was entirely in reinforced concrete, was executed in a very short time, at a very low cost, to the benefit of the contractor, and the profit made was the result of suitable and sufficient plant and sound organisation at all points. It is not necessary to give details of wooden forms for the different features of a concrete building, as the design of these will naturally be governed by the circumstances of each individual case, while typical details can be obtained from one of the many excellent text books on concrete work, which deal with the subject in a general way. It is necessary to conform to the conditions that have been specified, and apply previous experience in order to obtain the best results.

Good form work is essential from the architect's and engineer's point of view, because badly designed and weak forms will mean defective concrete work, which cannot be rectified when the structure is finished, and any lack of interest will not remove the responsibility that must be carried by the party acting on behalf of the building owner.

The period that must elapse before the form work can be safely removed from the concrete is also a matter that must be decided by the architect or engineer, and, as this will depend on the type of work executed and the weather conditions prevailing immediately after concreting, some care must be exercised in deciding on the times to be allowed. An intelligent interest allied with experience are necessary to the supervision of concrete form work as well as to the contractor, as it is an important section of the execution of concrete structures.

(To be continued.)

PART I.—I. Introduction, Steam shovels, Jan. 13; II. Steam shovels, Trench diggers, Jan. 20; III. Grab buckets, scrapers, Jan. 27; IV. Drag-line excavators, Feb. 3; V. Derricks and cranes, radial loader, paving-breakers, Feb. 17; VI. Surplus Soil Transport (Hand Labour), Feb. 24; VII. Surplus Soil Transport (Horse-drawn wagons, Steam-driven wagons), Mar. 3; VIII. Surplus Soil Transport (Steam-driven wagons), Mar. 10; IX. Surplus Soil Transport (Steam-driven wagons, Petrol wagons, Narrow-gauge track with wagons), Mar. 17; X. Surplus Soil Transport (Narrow-gauge track with wagons, Trucks on Standard-gauge track, Electrically-driven trucks and vehicles), Mar. 24.

PART II.—XI. Foundation Work (Ordinary soils, Soft soils), April 7; XII. Foundation Work (Soft soils), April 17; XIII. Foundation Work (Soft soils), April 21; XIV. Foundation Work (Soft soils), April 28; XV. Foundation Work (Soft soils), sheet piling, May 5; XVI. Foundation Work (Soft soils), steel-sheet piling, May 12; XVII. Foundation Work (soft soils), steel-sheet piling, pumping, May 19; XVIII. Foundation Work (Soft soils), pumping, May 26; XIX. Foundation Work (soft soils), foundation piles, June 2; XX. Foundation Work (soft soils), foundation piles (cont.), June 9; XXI. Foundation Work (soft soils), foundation piles (cont.), June 16; XXII. Foundation Work (soft soils), Waterproofing, June 23; XXIII. Foundation Work (soft soils), Waterproofing (cont.), June 30; XXIV. Waterproofing (cont.), July 7; XXV. Water Supply, July 14; XXVI. Concreting, July 28; XXVII. Concreting (cont.), August 4; XXVIII. Concreting (cont.), August 11; XXIX. Concreting (cont.), August 18; XXX. Concreting (cont.) Aug. 25.

Town Planning: Interim Development.

The Minister of Health has issued a General Order under section 45 of the Housing, Town Planning, etc. Act, 1919, for the purpose of enabling development to proceed in areas for which resolutions have been passed or authority given to prepare town planning schemes. The Order is given below.

The section in question provides that if works are carried out in accordance with the conditions prescribed in an Order made by the Minister, a claim for compensation under the scheme in respect of the works shall not be prejudiced.

It is highly important that persons wishing to develop shall not be delayed on account of the preparation of a town planning scheme, and the General Order has been made with the object of preventing any such delay.

At present Local Authorities can allow development, but the consent of the Minister has to be obtained in each individual case. This is a cumbersome procedure, and under the General Order Local Authorities will be able to allow development themselves without reference to the Minister, except in disputed cases.

STATUTORY RULES AND ORDERS, 1922, No. 927.

TOWN PLANNING, ENGLAND.

THE TOWN PLANNING (GENERAL INTERIM DEVELOPMENT) ORDER 1922, DATED AUGUST 12, 1922, MADE BY THE MINISTER OF HEALTH, UNDER SECTION 45 OF THE HOUSING, TOWN PLANNING, ETC. ACT, 1919 (9 AND 10 GEO. 5, C. 35).

67,929.

In exercise of the powers conferred on him by Section 45 of the Housing, Town Planning, etc. Act, 1919, the Minister of Health hereby orders as follows:—

1. This Order may be cited as the Town Planning (General Interim Development) Order, 1922.

2. In this Order the following expressions have the meanings hereby assigned to them respectively:—

"The Minister" means the Minister of Health;

"Area" means any area in respect of which a resolution deciding to prepare a Town Planning Scheme has been duly passed and (where necessary) approved by the Minister under Section 42 of the Housing, Town Planning, etc. Act, 1919, or for which authority to prepare a Scheme has been given under Section 54 of the Housing, Town Planning, etc. Act, 1909; (a)

"The Local Authority" means the Local Authority who have decided or been authorised to prepare a Scheme for the area concerned.

3. For the purpose of Section 45 of the Housing, Town Planning &c. Act, 1919, the Local Authority may permit the development of estates and building operations to proceed in the Area pending the preparation and approval of a Town Planning Scheme, subject to the conditions contained in this Order.

4. A person who desires to apply for permission under the last preceding Article, shall apply to the Local Authority for permission in writing and shall furnish to the Local Authority, together with his application and in the form required by them, a plan in duplicate showing the proposed method of development and proposed buildings and such further particulars as the Local Authority may require.

5. The development of estates and building operations shall comply with all such requirements as the Local Authority may reasonably impose.

6. The Local Authority shall not, except with the consent of the Minister, permit any development or building operations inconsistent with the provisions of any Local Acts, Regulations, or Building Byelaws in force in the area.

7. The Local Authority shall, as soon as may be, inform the applicant in writing that his application for permission to proceed is granted or refused, as the case may be, and, if the application is granted, shall state in writing the terms of any requirements which they may impose.

8. Any applicant aggrieved by the neglect or refusal of the Local Authority to grant permission, or by any requirements imposed by the Local Authority, may appeal to the Minister, whose decision shall be final and shall have effect as if it were the decision of the Local Authority.

(a) 9 E. 7. c. 44.

9. Subject and without prejudice to the power of the Minister to revoke or vary this Order, the Order shall remain in force in an Area or part of an Area until the date of the approval by the Minister of a Preliminary Statement for that Area or part under the Ministry of Health (Town Planning) Regulations, 1921, (a) or, where a Preliminary Statement is not required to be prepared, the date of the approval by the Minister of a Scheme for that Area or part.

Given under the Official seal of the Minister of Health, this Twelfth day of August, in the year One thousand nine hundred and twenty-two.

(L.S.)

I. G. Gibbon,

Assistant Secretary, Ministry of Health.

(a) S.R. & O., 1921, No. 373.

Machine Made Kiln-Burnt Stock Bricks.

On Saturday afternoon last an instructive visit was paid by the Incorporated Clerks of Works' Association to the brickworks at Halstow (near Newington, Kent), where Messrs. Eastwoods, Ltd., manufacture stock bricks which are remarkable for the fact that they are both machine-made and kiln-burnt. London stocks are usually, of course, made by hand, dried in the open under hacks, and burnt in clamps. At Halstow and at Conyer, in the same neighbourhood, the firm have a plant which is unique in this country, and by which stock bricks of precisely the same materials are made all the year round, and which are remarkable for strength, shape, colour and porosity.

The party, about forty strong, assembled at Victoria and travelled in reserved carriages to Sittingbourne, where they changed into motor conveyances for a pleasant run of some four or five miles to Lower Halstow. A thorough tour was made, beginning at the brick earth-pits. These are situated nearly a mile and a half away from the works. After the earth has been dug it is conveyed to a circular washer, where it is mixed with several times its own volume of water and, together with the required proportion of chalk, is stirred until it forms a liquid slurry. This slurry is then pumped into the "wash-backs" or reservoirs, where the clay gradually settles and the water is drained off. These reservoirs are first bottom-lined with a 10-in. layer of special clay for strengthening the subsequent mixture. The process of weathering may last from five to eight or nine months before it attains the right degree of plasticity for use. The clay when required for use is loaded into trucks for conveyance up the inclined cable-way to hoppers, where the necessary soil or domestic ashes is added. It then descends to the moulding machines. The wet or green bricks are placed on trolleys and run into a dryer for 24 hours, from which they emerge perfectly fit for conveyance to the kilns. Both the drier and the kiln afford a remarkable advance upon the time-honoured methods of manufacture. After five days in the kiln they pass out of the end of the long tunnel, which at its hottest reaches a temperature of 2,000 degrees Fahr., and are sorted into their various qualities ready for despatch by lorry or barge. Sixty per cent. of the output is best bricks, and there is no waste at all. It will be apparent that Messrs. Eastwoods enjoy an enormous advantage in that they can make, dry, burn and deliver their bricks in the space of eight or nine days. Their resources for producing these machine-made kiln-burnt stocks quickly will be well tested by their order to supply 10 millions for use on the Tube Railway at Golders Green.

At the tea given after the tour of the works a vote of thanks to Eastwoods, Ltd., was proposed by Mr. H. W. Page, the president of the Incorporated Clerks of Works' Association, who spoke warmly of both the up-to-dateness of the plant and the courtesy shown by the members of the staff who acted as guides. This vote of thanks was briefly acknowledged by Mr. J. F. Wyllie, the general manager.

The London County Council invite application to the Clerk of the Council, not later than September 27, for appointment as District Surveyor for the district of North Woolwich. The gross receipts from the district last year were £658, and it is estimated the total for 1922 will be £750.

In connection with the Bartlett School of Architecture of the University of London, the new building for the Atelier, presented by Messrs. Goodman & Lorden, will be open in October. The building is situated in Malet Street, immediately north of the British Museum. The Atelier is intended for the study of advanced architectural design, and will be open to those who have already obtained their first qualifications in architecture.

The Grand Tour of an Architect.—V.*

By W. H. F. Basevi.

The autumn of 1817 found George Basevi back again in Rome, but in a state of unrest and dissatisfaction. Following on prolonged study devoted almost entirely to the remains of ancient Roman architecture came his tour in Northern Italy, and his sudden interest in the creations of Palladio. Although Palladio's style was based on classical Roman art, it was classical with a difference; and it was this very difference which, three hundred years earlier, had influenced architectural design throughout Western Europe, and in England was noticeable in the work of Inigo Jones.

Basevi does not appear to have been acquainted with Palladio's once-celebrated work, "*I Quattro Libro dell' Architettura*" (1570), so at Venice and Vicenza he came suddenly and unprepared upon Palladio's most notable buildings. The result was a complete overturning of his mind, a feeling that his ideas and convictions must be reconsidered, and all his thoughts rethought. In fact, he was suffering from mental growing pains.

In this turmoil of doubt he set himself, as a first task, to study over again every building in the Campo Vaccino, and then proceed to consider modern ones. This distressing condition of uncertainty seems to have possessed him for about three months; and a wet autumn, which hindered outdoor work, added to his discouragement by making him feel that his time was wasted and that he might as well be in England. But with the beginning of the new year his anxieties are dispelled.

"I have been hard at work lately in taking memoranda of the palaces in Rome, both of their defects and beauties. This is an improving task." And again: "Tell father that although he wishes me to continue colouring, I cannot do it to a great extent. I have not time. I can make three to one the other way. I have drawn one or two in sepia, which is durable and has all the effect of colour. Williams tells me I am quite a different man; that I have advanced with more rapid strides than anybody he knows. I think I have got on a little, but not, perhaps, to such an extent."

The approaching end of his stay in Rome spurred him to greater efforts, and again he writes: "I have been drawing very hard, and this week have made an addition to my portfolio worth all the rest put together in point of execution. I have, I think I may say without vanity, got on very much. My taste is refining itself, and I see things through a much clearer medium. I begin to think that it matters very little what you study provided you observe nature very closely. It is the only thing that will get you on and make your production bear the appearance of originality. I let others measure: give me nature—she is the best instructress."

In April, 1818, he set out for Greece accompanied by his two friends, Carrighan and Williams. A letter written on the journey contains a somewhat mysterious reference to Lord Byron. "I have always forgotten to mention that the satire 'Beppo' of Lord Byron is, in my opinion, a continuation of his life. Beppo is the name of two-thirds of the gondoliers, and the facts correspond with his actions at Venice in every respect. The reason he is so inveterate against society is that Mr. S. sent him a letter of advice while he was at Venice—a very hard pill to digest, of course."

His route lay by Naples, Otranto, Corfu, Salonica, and Constantinople, where, to his annoyance, the Turkish authorities objected to his sketching. He reached Athens in the beginning of July, and was at once hard at work in spite of the heat. At the end of the month he says: "I have been in Athens a month and have made no less than seventeen drawings, large and small—or rather large and larger, for I never draw in small. I have to-day finished (as much as I think proper) a very large view of the temple of Minerva. It has been the labour of a week nearly, and has made me quite familiar with all the buildings. I am making a coloured drawing of the Temple of

Thesus. I was introduced to Lord Byron's *Maid of Athens* the other evening. She is not nearly so handsome as I expected."

In August one of his companions, Wilson, left him for a month's tour in Morea; but Basevi felt that his duty lay in Athens "to obtain memoranda of the most important objects to be studied: to exhaust this classical city would require a studious residence of four or five years."

Hearing from his brother that there were proposals to build a number of churches in London and the south of England, he determined on returning through Italy to make a special study of the churches in Sienna, Florence, Leghorn, Pisa, Genoa, Milan, Verona, and Venice. This scheme, to a large extent, he succeeded in carrying out, and it was doubtless of great use to him a few years later, for a number of churches are included in his list of works. Meanwhile his "daily employment is drawing, drawing, drawing: one day the Parthenon, another the Theseion, and so on."

There follows an amusing account of the jealousies among artists. "We are three artists here, counting myself, though architect, as one, and a little jealousy has crept in among us. Lady Ruthven's (?) artist is jealous of me, and Eastlake is not altogether free from this folly. I have been very successful in my choice of points of sight, and of some of the same things have made a greater thing so it is thought, and they have been copying me. This among artists is not considered a correct thing to do; but I have never noticed it in any other way than by keeping my sketches when finished more to myself, and never asking to see theirs. They have understood me, and have set about point-hunting everywhere, which affords Wilson and myself great amusement. Eastlake has carried this copying plan to a great extent. Six or eight things he has made *à la quade*. He ought to be ashamed of it, as he is a regular established history painter. And the best of it is that instead of being obliged to me for these hints for positions, they are jealous of me. What a pack of fools artists are. They might copy all of mine if they would do it openly. I am not a painter, nor wish for a reputation as such. I can never interfere with them, nor they with me."

Towards the end of August he writes: "Being alone has given me a spur to work harder, for the excessive heats had abated my ardour a little. The thermometer has been up to 104 several days together. I now begin to see an end to my stay here. . . . I have only just now returned from Cape Sunium, where I passed four disagreeable days, and as many worse nights. Great remains of the temple of Minerva Sunias still exist: sixteen columns and three architraves, of the Doric order. As yet I have seen nothing but Doric, exclusive of one Ionic temple in the acropolis. This temple is of white marble, and most divinely situated. Great masses of ruins are strewn around, overgrown by shrubs. Even the most fastidious artist might here be content. I succeeded in bringing away six sketches, one slightly coloured, the rest in pencil. I should have done more, or rather I should have done them better but for the wind. It blew a hurricane all the time we were there. Our umbrellas were broken, and our paper torn. I have experienced what an artist suffers, and under what disadvantage he labours."

In October he unexpectedly received an offer of a passage in an English corvette via Zante to Malta. Here, in view of possibilities on returning to England, he made a special study of the churches. "One or two churches here might rival in magnificence the splendid ones of Rome. I am paying great attention to them. I never let a church escape me." But, on the whole, Malta disappoints him. "There is nothing to be seen here except one or two good churches. The best is dedicated to St. John. The altar-piece is very highly esteemed. Eastlake thought it so fine that he copied it. I must own that I am not of the opinion of the world. It certainly is not well coloured, and I think the subject vulgarly and disgustingly treated."

* For preceding articles see July 7, July 21, July 28 and August 18.

It is horrid in the extreme. St. John is bleeding like a pig: his head all but separated by the blow from the axe: the executioner is in the act of drawing out a knife to cut it quite from the trunk. I believe the reason I bother you by describing pictures is that I have been so long out of the way of seeing any that they make greater impression on me than formerly."

Continuing his journey by way of Palermo, he stayed a few days in Sicily, where, comparing styles of architecture, he says: "It was angels that built those at Athens, and men those in Sicily." Thence he passed to Naples.

"I am employing my time in visiting the churches here to see if I can cull from them any hints for English ones. In your answer to this be very particular to let me know all that is going forward in the architectural line: when the designs for the churches are to be sent in: what money is to be expended on those to be built in London; in fact, anything that may be going forward."

Christmas found him back in Rome.

"To return to my drawings. I am quite discontented with all my Roman ones. What a deal I have learnt by my trip to Greece! I may not be able to produce so many drawings as other students, but my mental improvement has been progressive. I have never been satisfied with myself, which has made me destroy very many, more especially during the earlier part of my stay in Rome. I certainly left Soane's office without knowing anything. I have at least gained a decided opinion and taste of my own. . . . John Soane [son of the architect] and his wife are here. I suspect matters are not over well with the old gentleman. I am just as great a favourite with her as ever. He has brought an artist with him, and works very hard. His old itch for carrying books under his arm has not left him. He was with me this morning, and has carried off a couple of mine, hang him!"

Correspondence.

Architectural Education and Design.

To the Editor of THE ARCHITECT.

SIR,—Referring to the recent discussion on architectural education, I am a strong supporter of the "Articles" system, in that it produces an intelligent architect well versed in economic, modern, and commercial designing, and on such an occasion, when a large and impressive public building is proposed to be erected, in every case we have an open competition, and if competitors are turned down for lack of designing, there is no harm done to the community, or anybody concerned. It really comes to this: that no architect can force a design on the public nor can he build unless the design satisfies his client, and even where an architect brings out a good sound architectural design, in nine cases out of ten his client will turn it down, inasmuch that he will not pay for matter which will not serve his commercial ends.

This country to-day is crying out for practical architects who can design on modern lines—i.e., who can design a building on economic and useful lines. Again, in nine cases out of ten we have such buildings to design, and the odd chance of a town hall or architectural edifice can be tackled by such men who specialise in artistic design.

I think we are practically the only country where an architect is required to master so varied a course of subjects. It is where this country has for all time been at fault, inasmuch that the average Britisher practises every known craft, and ultimately is sure of nothing at all. To tackle one subject well is to be a master of one's profession and the examinations as set down by the R.I.B.A., do not give fair play to an articulated pupil. They expect in so short a time what it is impossible to produce, and modern building, with its scientific modern principles, gives no time for the minute study of doorways and pretty mouldings, etc., which our forefathers so revelled in.

The articulated pupil is a practical proposition and a man who is going to erect the hundreds of buildings to suit the modern commercial world, and who is going to rebuild the world or part affected by the late war.

In the majority of cases a man between 20 and 25, brought up under articles, is by far the more clever and up-to-date all-round practical architect than is ever the case with a student of a university, and the former is the man for whom the public are calling, and yet because a University man can dazzle the world

Early in January he paid another visit to Tivoli, where, he says, he "worked like a dragon. I have many things to do over again, for I was such a youngster when I studied the Temple of Vesta that I would not give a fig for all my memoranda."

After a few more weeks spent in Rome, he started in March on his return journey to England. At Sienna and Florence he made new studies of the churches. In the latter town he did some work which was to repay him in later years when engaged on building Belgrave Square. "I study the palaces with the idea of collecting materials for building a square in a regular manner, with handsome exterior and commodious entrance." At Pisa and Bologna short halts were occupied in studying churches and staircases, and, as ever, in visiting picture galleries. From Venice he writes: "You can't conceive how wise I have been in making this trip a second time. I see everything with new eyes, as if a film had been cleared away. . . . Lord Byron is still here, and leads much the same life as before. He is, however, parted from the lady whose adventures and his own he describes in 'Beppo.' It is reported that he spent at least ten thousand pounds on her."

Palladio drew him to Vicenza once more for a last glance at the buildings he would never see again. Thence he hastens his journey, and on June 9 he writes a brief note from Paris to announce his approaching arrival in England.

What were his feelings when he wrote this last letter from Paris? Did he remember the first, written on his arrival in that city nearly three years earlier, at the outset of his great enterprise, when he wrote in a spirit of doubt and despondency: "I am in the midst of an immense forest. Out of numerous dark avenues that lead from the centre, but one leads to light"?

(The End.)

with a majestic design for an art gallery or world centre approached by many thousands of steps in all directions and descending to the water edge of a huge lake (and the whole costing many millions, which modern exchequers could never produce) he can thus obtain his degree against the student who, though a thoroughly trained architect, has not developed that transcendently glorious conception of design which is practically the only sure point on the part of the University man.

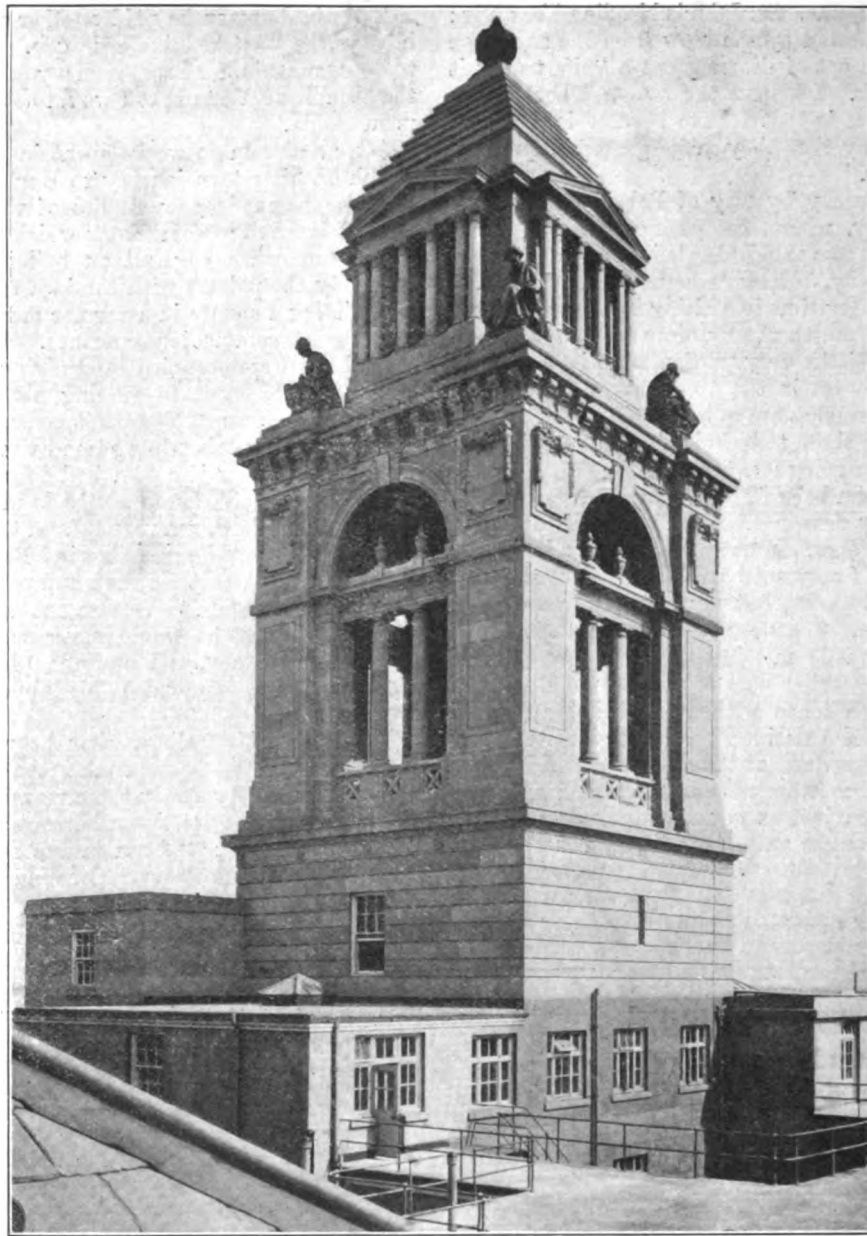
To sum up briefly: he is barred recognition because he has not had the training in design of a University student, and here this latter can fully qualify, having been exempted in various subjects and can turn out into the world fully armed to fight against the very existence of the office-trained practical man.

To quote the intermediate examinations, there are many students who, given a reasonable time, could efficiently design a feature equal to any University man. Because one is less rapid in design than another, it does not mean for a moment to say that he is no good as an architect. It is not fair to so judge him. I sincerely trust that matters may be adjusted and given careful consideration, because financially architectural education is a large item, and it does not seem fair that architectural students should be tossed about unmercifully and have to bear the hardships consequent on an overcrowded profession. They should be advised in the first place as to their efficiency or their prospects instead of being treated as school children until 30 years of age. I should like to see genuine fair play. Many of the powers who enforce these stringent examinations entered the profession through this side door, or even earlier still, through the large door with no examinations as barriers at all.—Yours, etc.

FAIR PLAY.

According to a report in the "Rand Daily Mail" of July 19, the chairman of the Finance Committee of the Pretoria Town Council, when seeking for formal authority to raise a loan of £750,000, stated that it is anticipated that the Council will soon have in hand some £200,000, which it is proposed to devote to the construction of a Town Hall.

The 91st quarterly report of the General Federation of Trades Unions, dealing with the three months ending June 30th, states that the accounts are satisfactory in the sense that, after liquidating all accrued liabilities, there is still a balance on the right side of £56,705. During the quarter ending March the disbursements for dispute benefit totalled £18,380, but for the quarter dealt with in the report they exceeded £87,000.



WALLASEY TOWN HALL, THE TOWER. Messrs. BRIGGS, WOLSTENHOLME & THORNELEY, Architects.

The Society of Architects' "Victory Scholarship," 1922.

The Society of Architects' Victory Scholarship was founded in 1919 to commemorate the war service of its members and to perpetuate the memory of those who fell during 1914-18. It is awarded annually for Competition in Architectural Composition and Design and is of the value of £100, which must be used by the winner in advancing his or her professional education. The competition is open to any British subject, man or woman, under thirty-five years of age, without any fee, and is divided into two sections: Part I., the open eliminating competition; and Part II., the final competition, restricted to ten competitors selected by the Jury of Assessors.

The latter is composed of the Patron of each of the Royal Academy Ateliers, two representatives of the Society of Architects, and a representative of each of the Architectural Schools entering two or more candidates for the competition.

Part I. consists of an *esquisse* prepared "*en loge*" at various centres within twelve hours, and Part II. of a large *projet* for which an *esquisse* is prepared under similar conditions at the First Atelier of Architecture in London, the competitors afterwards being given a month in which to complete their final designs, which must not depart from the general lines of the twelve-hour final *esquisse*. These final designs are developed at any place convenient to the competitors.

This year (1922) there were sixty-six entries, including a woman architect, for Part I. of the competition, which was held in co-operation with the Architectural Schools in London (two centres), Glasgow, Leeds, Cambridge, Liverpool and Sheffield on June 10.

The subject was a ceremonial staircase, and fifty-six of the

candidates prepared *esquisses*. The Jury selected the following ten candidates to compete in Part II. in London on July 15: J. A. Jellicoe (London), J. C. Shepherd (London), N. C. Mackey (London), D. Brooke (Liverpool), G. F. Shanks (Glasgow), E. N. Channon (London), H. St. John Harrison (London), A. S. Knott (London), Keith D. P. Murray (London), P. Hardy (London).

The subject for Part II. was "A Stadium for Olympic Games." Each of the ten selected competitors prepared final *esquisses* and eight afterwards developed their designs, which were adjudicated upon by the Jury in London on August 23. The following award has been made subject to confirmation by the Council of the Society of Architects.

No. 97. H. St. John Harrison (London), £60 and the Gold Medal.

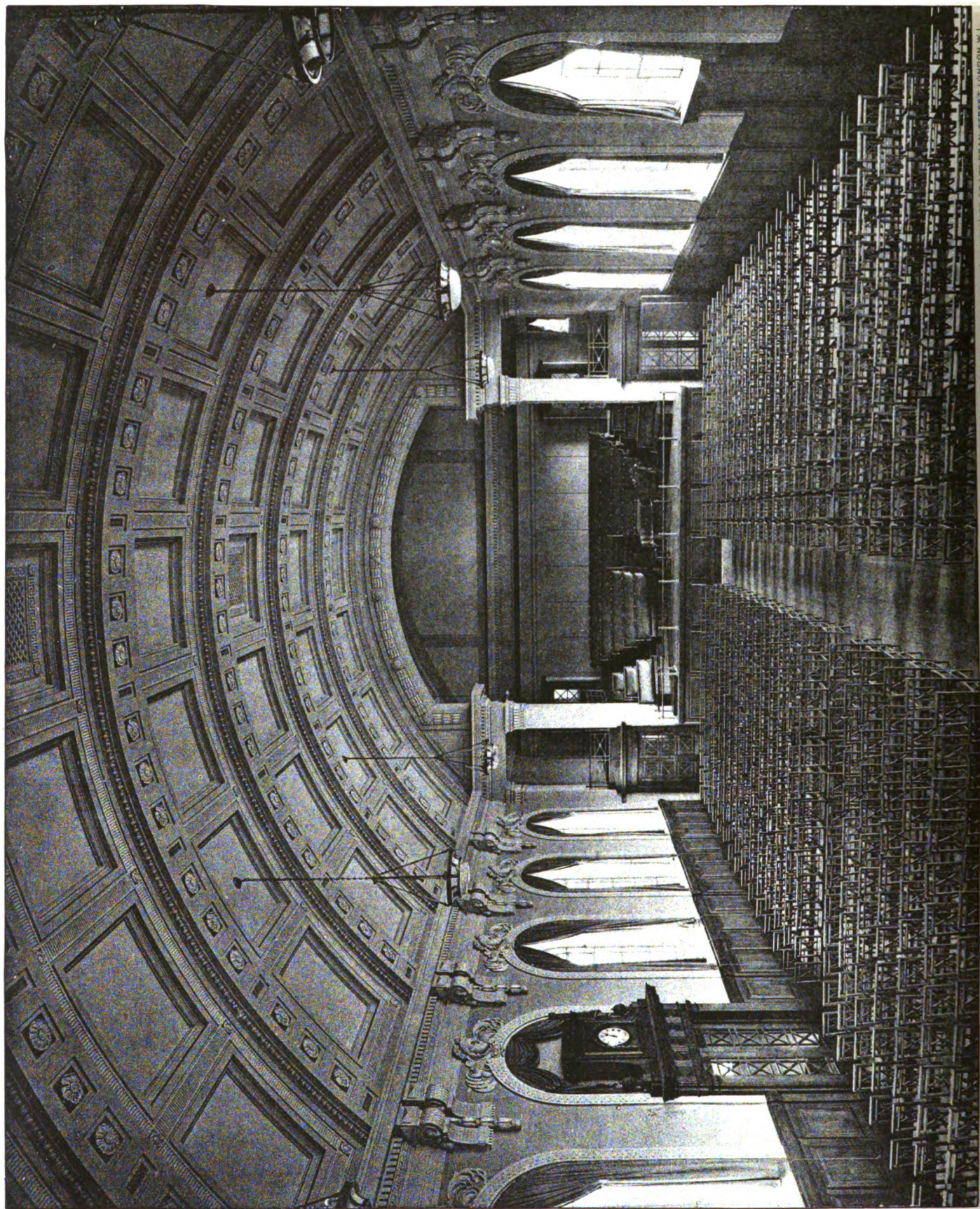
No. 68. N. C. Mackey (London), £20.

No. 107. K. D. P. Murray (London), £20.

The report of the Jury states that while the general standard is much higher than in previous years there is no design of outstanding merit beyond those of other competitors. The Jury therefore has felt bound to divide the prize again.

Mr. Robert Atkinson, on behalf of the Jury of Assessors, will, on a date to be presently advertised, give a public criticism of the designs.

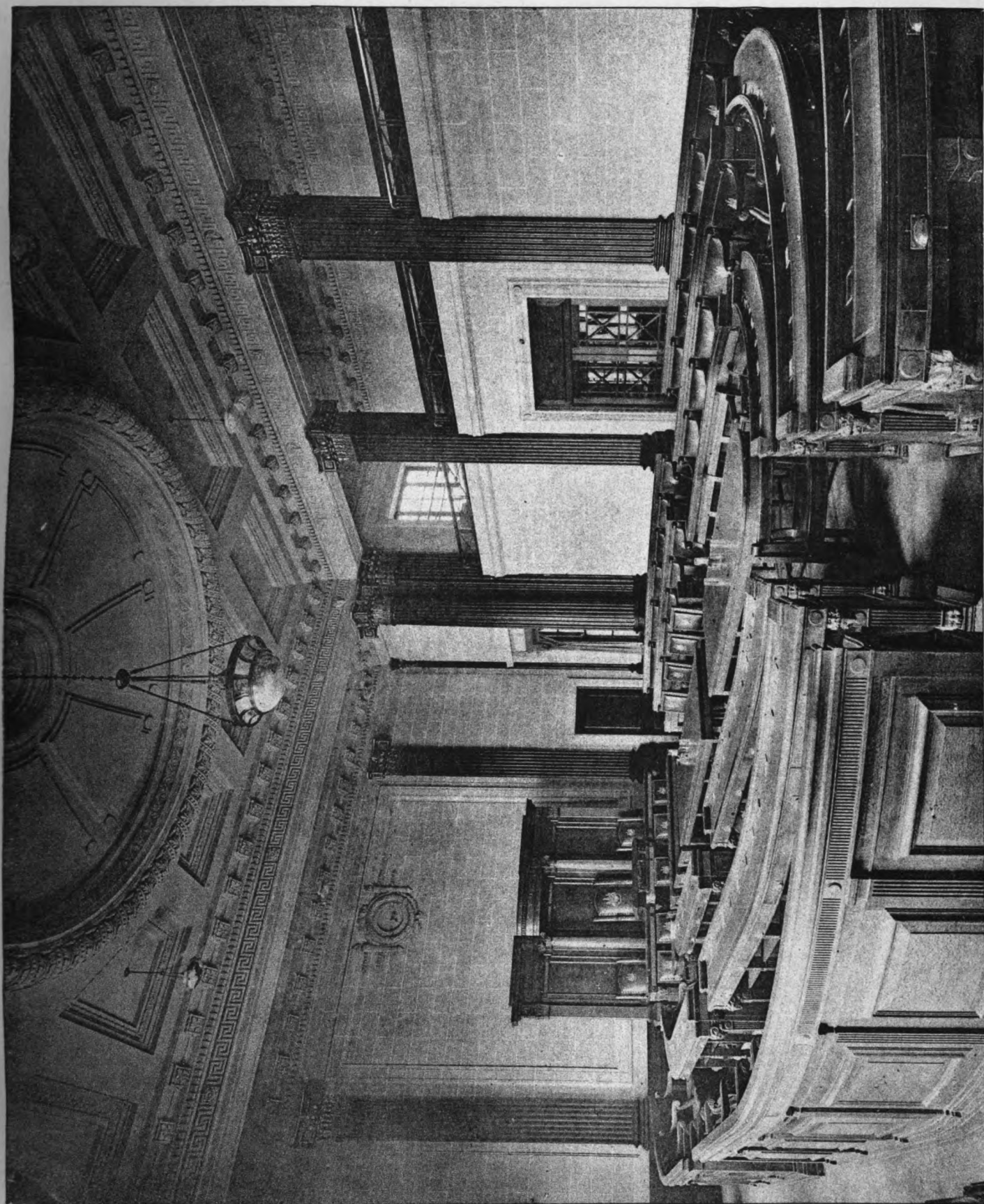
The competition drawings and *esquisses*, which are an object lesson not only in the skill of the competitors in architectural composition and design, but also in their ability to grasp and delineate in a few hours the essential features of a complicated and unusual programme, will be on view at the Society's rooms, 28, Bedford Square, W.C.1, from 10 a.m. to 5 p.m., between September 4 and October 13 inclusive, except on Thursdays and Saturdays, and will afterwards be at the disposal of the Schools of Architecture in the provinces for exhibition purposes.



NEW TOWN HALL WALLASEY: ASSEMBLY HALL.

BRIGGS, WOLSTENHOLME & THORNELEY, ARCHITECTS.

"INK PHOTO." SPRADUE-HAYCOCK PRINTERS LTD. 69 & 70, DEAN STREET, LONDON, W.1.



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NEW TOWN HALL WALLASEY; COUNCIL CHAMBER TO DAIS.

BRIGGS, WOLSTENHOLME & THORNELY, ARCHITECTS.



WALLASEY TOWN HALL, BRIGHTON STREET FRONTAGE. Messrs. BRIGGS, WOLSTENHOLME & THORNELEY, Architects.

The Future of Stratford-on-Avon.

An important report on the control of the development of Stratford-upon-Avon, prepared by Professor Lascelles Abercrombie, a well-known educationist and writer, and his brother, Professor Patrick Abercrombie, A.R.I.B.A., Professor of Civic Design at Liverpool University, has been issued. The suggestions contained in the report will excite wide interest, for, as the experts aver, "Stratford-upon-Avon is not merely a Warwickshire town; it is much more than the community of its own inhabitants. It has come to be regarded by the whole English-speaking world as the trustee of ideal interests of extraordinary celebrity, any injury to which would provoke very perceptible resentment." The Shakespearean association, the report points out, is not confined to Stratford . . . "it is almost as celebrated in neighbouring villages such as Shottery, Snitterfield, Wilmore, Hampton Lucy, and Charlecote, and just as Stratford is not only Shakespeare's town, but in itself one of the most beautiful towns in England, so also is it with the surrounding country: its noble river (one of the legendary rivers of Europe), its landscape of water-meadows, hills, and trees, to say nothing of its delightful farms and hamlets, make it, quite apart from the enchantment of association, one of the loveliest tracts of country in England, and, therefore, in the world. An enthusiast might well be pardoned if he claimed for Stratford that its town, its church, and its countryside together concentrated into a kind of quintessence the whole beauty of England. And the triple combination has so far been miraculously preserved entire: the countryside perhaps the least altered of the three since Shakespeare's time." From these and other premises the conclusion is reached that the surrounding countryside requires conservation and, therefore, it is a proposal of the report to include the foregoing villages and all other land within a radius of five miles of Stratford in a town-planning scheme so that other villages included would be Wolverton, Bearley, Aston Cantlow, Billesley, Temple Grafton, Binton, Welford-on-Avon, Luddington, Marston, Clifford Chambers, Preston-on-Stour, Atherston-on-Stour, Alderminster, and Loxley.

In the preface to the report it is laid down that "the difficult duty imposed upon Stratford-upon-Avon of holding itself in trust for English-speaking culture should not really conflict with the town's best practical development. . . . The growth of Stratford-upon-Avon makes its future development an urgent problem entirely because it is prospering far more than it ever could have done if it had remained a merely respectable market town. That it has so remained is due again precisely to the fact that it is the trustee of national ideal interests. . . . But the problem of the

town's development remains; and that is, to allow the development to take place without injuring the characteristics which chiefly promote it. They are characteristics which might easily be injured; and if they were, the vitality of the town would suffer. On the other hand, the vitality of the town would equally suffer if the preservation of these characteristics were allowed to thwart development, or to become spectacular and unreal."

The question of preserving Stratford's association with Shakespeare, the report says, can never be properly interpreted as an enforced stagnation. "Not to maintain, if it would not hamper present prosperity, such beauty and linkage with the past as Stratford can show would be merely barbarous. But in this case the philosophical view would be that the inheritance is, for Stratford, as much a form of natural wealth as a seam of coal, and to be as carefully managed, with the advantage that it is a form of natural wealth which, properly managed, is inexhaustible. The past can only survive as a contribution to the present: and it is, of course, quite possible for this contribution to be a tyrannous constriction."

"When, for example, such a town as Stratford finds itself in possession of considerable retail trade, the premises which it has inherited at once present apparent disadvantages, and there is a strong temptation to remodel them. Old buildings are converted into model shops. The very qualities of picturesque antiquity which make the buildings awkward as shops are the qualities which have called the shops into existence. No wise shopkeeper would ignore this; and it is perfectly feasible to adapt old premises to modern needs without serious injury. We are astonished that Stratford can show recent instances in which this principle has been deplorably neglected. To replace the ground floor of an Elizabethan building by a plate glass shop front is the sort of crime which one would have hoped had become extinct in Stratford; but, since it has not, the town should provide itself with means to prevent it. The influence of the past must also control new work. It would be difficult—perhaps dangerous—to lay down specific styles which ought to be used, but two portentous premises show how the best intentions, uninformed by taste, may result in monstrous damage to the character of the town. Certainly it is clear from these cases that what Stratford cannot put up with is Ruskinian—Venetian—Gothic carried out in busy terra-cotta, or Victorian Renaissance in dismal ashlar. And other styles could, no doubt, as easily be barred, with or without instances; the Baronial style, half Scotch and half Rhenish, is not usually regarded as a happy inspiration for the Memorial Theatre, and will hardly set a precedent."

Describing the architecture of the town the report states it

"cannot be summed up as Elizabethan. The eighteenth century was clearly a period of great building activity in Stratford, and the eighteenth century had no notion of using any style but its own. . . . It manages to maintain the continuity of the town's character; and in its quiet dignity and formal elegance it admirably sets off the examples of seventeenth-century half-timbered work. The nineteenth-century architecture also had no notion of using any style but its own; and logically this, too, may have historical value. But where it is noticeable, it is for the most part artistically vile, and a violent and disruptive intrusion into the town's visible character. . . . Stratford has not always been so careful as it now is of its inheritance. The vandalism which ruined the frescoes in the Guild Chapel is to-day incomprehensible, but . . . there were replacements of architecture in the eighteenth century which do not lack justification. Where, however, seventeenth century work was simply plastered over, it was natural and entirely desirable that the impertinence should be removed. It seems mere pedantry to object that this is tampering with the town's visible history, for, of course, the past to be preserved in Stratford is, wherever possible, the age of Shakespeare. . . . The architectural policy of Stratford must, in fact, be one of maintenance as well as of restoration; and the effect of the eighteenth century fronts is one of the chief things to be maintained. Finally, we would naturally hope that the building policy within the historic quarters of Stratford will be to have as little conspicuous building activity as possible, beyond genuine restorations, and have replacement of quite indifferent buildings by well-considered and legitimate reconstructions; of both of these Stratford can show fortunate examples. We might also hope at some future date for the removal of the most serious of the injuries inflicted by the nineteenth century. Compared with these, Stratford's occasional florid and unnecessary reconstructions are the most venial of sins; which, however, should not be repeated."

The report next argues that Stratford's prosperity makes residential development inevitable. "It is not so signally dangerous, say, as factory development, but in the long run it may be just as dangerous insidiously. The circumstances require it to be controlled in character as well as in distribution. It will not often be an urban development, but where it so occurs its control must be absolutely stringent. As a suburban development, its occurrence must be viewed as possibly affecting the whole neighbourhood of Stratford, and means are required which would enable the character of that neighbourhood to survive." The third possibility of development—"infinitely more alarming than anything else we have mentioned . . . is the possibility that Stratford may be developed in the near future as a factory town; and some colour is given to the fear of this by the fact that quite recently the municipality has allowed the establishment of an aluminium factory. We may say at once that this factory, as it turns out, is in itself quite inoffensive. This, however, is only part of the question. A congregation of inoffensive factories would effect large alteration of the character of the town, and, therefore, of its future policy. The Stratford which at present certainly prospers would go, replaced by a new Stratford which might or might not prosper: no one can say. Moreover, the present aluminium factory is inoffensive where it is, but it would not be so in other positions." The report states that general factory development in Stratford is not likely, but that "large works using high power and likely to be conspicuous and make their influence felt in any way, works such as blast furnaces, steel rolling mills, glass works, textile works, chemical works, machinery works, etc., should not be permitted within the area in which Stratford's interests are effective. While there are districts incapable of æsthetic destruction and capable of further development, places like Stratford should certainly be maintained inviolate; any such works as those we mention would instantly destroy the present character of the town."

In conclusion the report summarises the main points of a practical solution of the complete problem as follows:—

- (1) Effective preservation of the character of the town implies preservation of the character of the countryside.
- (2) Explicit and complete control is required over the business district or old part of the town, that is between Guild Street and Holy Trinity Church and between Grove Road and the river Avon; this control to determine not only what building activity should be permitted but to be effective also over its architectural style.
- (3) Suburban development, besides control of residential building, to pay special regard to the requirements of day visitors and to the segregation of factories, if any.
- (4) Residential building to be controlled throughout the Stratford countryside, which for the convenience of discussion may be temporarily regarded as the area within a circle of five-mile radius round Stratford; in addition,

the villages, field paths, and natural features within this area to be jealously preserved.

The report proposes the establishment of a statutory regional committee representative of all the areas included in the scheme as provided for by the Town Planning Act, points out the methods and degrees of control possessed, or required, to enable the foregoing recommendations to be effective, and also discusses the provision of a new bridge over the Avon, riverside development above and below Clopton Bridge, and the parking of excursion and other vehicles.

In the penultimate paragraph the question of a cinema is mooted. "The notion that a cinema would be out of place in Shakespeare's town is a piece of sentiment we cannot share; and the Memorial Theatre does not apparently countenance it. To resist any demand for a cinema would be as unwise as to resist the demand, if it effectively exists, for a town band. But just as there is the wrong place for a band, so there is a wrong place for a cinema in Stratford. Otherwise, the multiplication of cinemas may safely be left to the laws of economics."

Housing from the Technical Point of View.*

By W. R. Davidge, F.R.I.B.A.

(late Housing Commissioner for the Southern Counties and London Areas).

The Government Housing Scheme was brought into being by a national emergency, and like many emergency measures has been much criticised owing to the inherent weakness of its finance, but the object lessons of good housing to be seen all over the country will be of incalculable value in the effort which will still have to be put forward to raise the general standard of housing.

It may be worth while to review the typical pre-war housing scheme of 1913 and see how it compares with its successor of the present day.

The Local Government Board only nine years ago, in their official publication, recommended cottages with narrow frontages of only 16 ft., and even showed back additions. Many cottages had only two bedrooms. Bathrooms were unrecognised, and even baths, when introduced, were almost invariably to be placed in the scullery, either under a side table, or in the floor, upright against the wall, or anywhere else so long as it was out of the way.

Lavatory basins and upstairs w.c.'s were alike unknown. The size of the rooms did not allow even for the proverbially necessary operation of swinging the domestic cat.

Then as to the style of architecture of those now remote days of 1913. Sound construction was important, but the employment of an architect in connection with a housing scheme was, except for the larger schemes, almost unknown.

Heavily paved byelaw roads and sometimes narrow little paved forecourts and tar-paved or brick-paved yards completed the "tale of the bricks."

The prolonged and careful inquiry instituted during the war by the Departmental Committee on Building Construction under the chairmanship of Sir John Tudor Walters, reported in 1918 on Housing and House Construction in detail, and the report of this Committee may be regarded almost as epoch marking, and in itself it was one of the greatest advances in housing ever made in this country. The Ministry of Reconstruction, it will be remembered, had also during the later stages of the war, issued a number of suggestive reports, including reports by the Advisory Housing Panel on the Emergency Problem, The Women's Housing Sub-Committee and the Housing (Financial Assistance) Committee.

Meanwhile, many organisations were bringing pressure on to the Government to reform their methods in dealing with housing and at the same time to encourage the local authorities to go ahead by guaranteeing them against all loss in excess of a penny rate.

The result of this constant pressure was that the Government gave way to the demand for improved conditions, and simultaneously gave way to the demand as to the penny rate. In this paper we have not to consider the financial aspect, all-important as this has been both in the starting off and in the shutting down of the scheme.

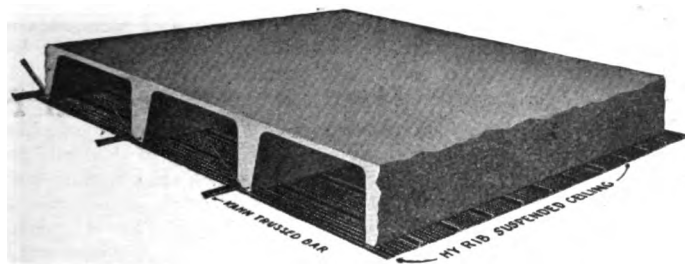
The technical aspect however at once altered. The Local Government Board, now the Ministry of Health, in their "Manual on the Preparation of State-aided Schemes," published early in 1919, embodied all the important conclusions of the Tudor Walters Report, and officially set a new standard of housing for the whole country, to be modified, it is true, at a later date in actual practice so far as sizes of rooms are concerned, but

* Abstract of a paper read at the Bournemouth Congress of the Royal Sanitary Institute.

† Cd. 9191—(1918).

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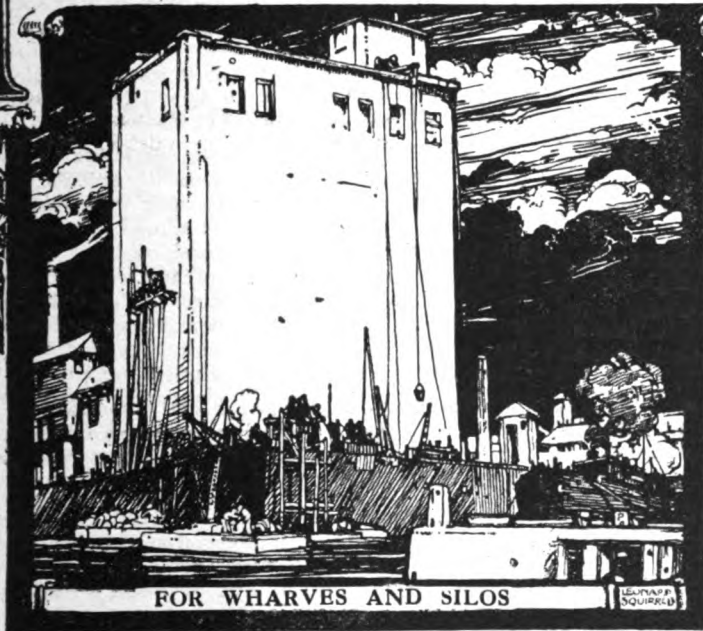
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otherwise substantially setting forth the standard which has now been put into practice.

The "Lay-out" and aspect of the house now for the first time received official consideration. It was recognised that the principal living-rooms should be arranged to get the maximum of sunlight possible, according to the time of day in which the room was likely to be used; that the larder should face north, or at any rate be protected from the direct rays of the sun; that the drainage of the house should be grouped, either in the front or the back of the house, with a view to economy, and that every house should have a bath, and, if possible, a bathroom.

"Byelaw" roads were to be no longer a necessity, and the width was to be in future regulated, not by a hard and fast bye-law but according to the traffic expected, and economy in road planning was strongly recommended.

A minimum of three bedrooms was regarded as essential.

The sizes of rooms officially recommended were as follows:—

| | |
|--|-----------------|
| Living Room | 180 square feet |
| Parlour (when provided) | 120 " |
| Scullery | 80 " |
| Larder | 12-16 " |
| Coal Store (to hold at least 1 ton) .. | 15 " |
| Bedrooms | 150 " |
| " | 100 " |
| " (Minimum) | 65 " |

Bath to be provided in separate chamber.

It will be seen at once how great an advance this standard was on the pre-war average of accommodation. The plans included as an appendix to the manual marked an equally great step forward. The minimum frontage for an ordinary living-room type or Class A cottage was from 21 ft. 6½ ins. to 25 ft. 3½ ins. as compared with the 16 ft., or less, of 1913.

In the parlour type (or Class B) cottage the frontages suggested were from 23 ft. 9½ ins. to 29 ft. 0½ in. as compared with the old standard.

Analysis of these plans shows that, with the abolition of back additions and long continuous rows of houses, it becomes desirable, in order to secure the best aspect to every room, to have a larger frontage to the individual house. Even one room and a 3 ft. passage will require at least 21 ft. frontage, and this is insufficient to give more than two small rooms at the rear of the premises. A better frontage for this type of house is from 22 to 23 ft.

With a double-fronted house, consisting of two decent rooms, a minimum frontage of about 25 ft. is required, even with a side entrance, and with the entrance in front a further 3 or 4 feet must be added.

A close study of the plans prepared for various housing schemes will show how economically most of them are planned, and it will be found possible to classify nearly every type of cottage by its class, frontage and aspect, for instance, B 24 (north), or A 22½ (south).

Much controversy has raged over the height of rooms, which were recommended by the Local Government Board as 8 ft. from floor to ceiling. Many Councils asked for 9 ft., to comply with local bye-laws, and the L.C.C. successfully claimed the right to increase the height to the dimension required by the London Building Acts, viz., 8 ft. 6 ins.

Steep pitched tile roofs, although not exactly recommended, were certainly encouraged as an additional amenity, and it was particularly desired to avoid the monotony of repetition, except possibly as to standardisation of detail—doors and fittings, windows, etc.

In practice, after three years, we find that owing to stringency of national finance and the damaging effect of rising prices, it was necessary in many cases to curtail the sizes of rooms somewhat below the "Manual" standard, and at the same time to eliminate many architectural features which might otherwise be desirable.

Everybody recognised that these curtailments were necessary, but, even with these, the standard of cottage building is distinctly improved, so far as amenity and convenience are concerned.

Much has been done, but very much more remains to be done.

The Government have not yet announced what they propose to do when they have completed the whole of the 176,000 houses to which at present they have set their hand, but it is evident that some form of municipal housing will have to be continued, and so long as the Rent Restriction Acts are in force, some form of assistance or contribution from national funds, either for the purchase of land or by other State grant is almost essential, if the housing is to be provided in the districts where it is most needed.

The recent report of the Unhealthy Areas Committee of the Ministry of Health, dealing with the appalling conditions of many parts of London and of our other large towns opens out a huge field for further effort, but it is evident that little, if anything, can be done to improve slum conditions unless the supply of new

houses is sufficient to allow a portion, at any rate, of the defective houses to be removed or reconstructed each year.

The Committee emphasise particularly the need for a definite plan for the development of London and similar large cities. It is absolutely essential that a carefully considered plan should be drawn up, and equally essential that our housing conditions should be still further improved by a steady programme of consistent work, spread over years, and possibly generations.

Trade Notes.

Medway's Safety Lift Co., Ltd., have sent us from their Sales and Publicity Department, at 35 Surrey Street, W.C., a four-page pamphlet describing and illustrating their latest electric single hook pulley-block, which is described as "compact, foolproof, self-sustaining and safe." It is made in two sizes for dealing with loads up to one and two tons respectively. One obvious advantage of it is the small amount of headroom required—sometimes a very essential point. Full particulars will be forwarded on application, or blocks in operation can be inspected by appointment. The name of Medway's is, as the firm rightly claim, a guarantee of good workmanship and material.

Messrs. David Harcourt, Ltd., of Birmingham, have recently issued a booklet giving a brief history of the well-known patent spun rivet copper sash chain which they manufacture, together with particulars of application, etc. Copies can be had on application to their works at Moseley Street. Attention may here be called to the fact that supplies of chains and fittings can be obtained through any hardware merchants and builders' ironmongers, many of whom hold stocks. Nearly a century has elapsed since the founder of the firm, Mr. David Harcourt, invented automatic machinery which made the production of copper chain a commercial proposition for the hanging of windows and kindred applications.

Messrs. W. Smith & Co., 76 Marsala Road, Lewisham, S.E., are the patentees and manufacturers of an "Anti-rattle Burglar-proof Window Fastener," which should minimize both those evils to vanishing point. This simple fitting consists of two pieces of brass with flanges which are screwed on to the sashes. To lock the window the thumbscrew is inserted through a hole at the top of each face and tightened as required. The window may be left open a couple of inches and remain equally immovable, thanks to a short flat rod, pierced at its top end to receive the thumbscrew, which may be turned into an upright position when required. There is no spring to break, nothing to rust or get out of order, and no catch which the burglar can knock back with a penknife.

Messrs. George Mills & Co., Ltd., Globe Iron Works, Radcliffe, near Manchester, have received the following from Thomas Catlow, Ltd., Thornybank Mills, Burnley:—"We have great pleasure in testifying as to the ability of your sprinklers. The first warning we had was the fire bell ringing, and we found the fire to be in the heald and reed room. Owing to dense smoke from the varnish on the healds it was impossible to approach the seat of the fire, and but for your 'Titan' sprinklers the whole place would have been burned to the ground."

Messrs. J. C. King, Ltd., printers, stationers and file specialists, 42-60 Goswell Road, E.C., have recently brought out a moderate price duplicate order or memo book which should appeal to architects. It is made with 100 printed tear-outs, 8 by 4½ ins., and 100 plain duplicates, the top sheets being numbered and on good white bank paper; the duplicates are numbered at an extra cost of 3d. per book. The leaves are carefully perforated to tear out cleanly. If desired the books can be obtained with cash lines at same prices. Each book is printed with purchaser's name, trade and address. The prices begin at 1s. 9d. each for the first dozen, and come 1d. cheaper for each following dozen.

Westminster Guardians are building seventy cubicles for nurses at a cost of £25,000.

Mr. R. Barry Parker, J.P., F.R.I.B.A., has been appointed architect for a public hall proposed to be erected in Chapelton, Derbyshire. Mr. W. Newton Drew, J.P., chairman of Messrs. Newton Chambers & Co., Ltd., is taking a leading part in the matter.

Mr. C. A. Hemingway, who died recently at Teddington, was one of the early pioneers of electrical contracting, being, in the early days of his career, associated with Messrs. Drake & Gorham. Afterwards, with a partner, he opened under the style of Hemingway & Pritt at Victoria Street, S.W., and Richmond. At a later stage he joined the staff of the General Electric Co., Ltd., where his experience and personality made him both valued and respected.



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The Relay Automatic Telephone System.

The new Director of Telephones has made a good beginning in the direction of reform by the conversion of the telephone exchange at Fleetwood, Lancs, to relay automatic working. Automatically operated exchanges have been on their trial in England during the last decade, and have attained pronounced success in eliminating operating errors and delays.

Fleetwood's exchange is unique in that it is the first of its kind opened for public as distinct from private service. All modern telephone systems, whether manual or automatic, utilise small electro-magnetic "relays" to a very large extent for controlling the various electrical circuits, but the system installed at Fleetwood performs the whole of the work of establishing and controlling subscribers' connections entirely by means of such "relays," without the intervention of mechanical switches or continuously rotating shafting employed in other automatic exchanges. The system has been termed the Relay System; it might also be characterised as the silent and motionless system, for the moving parts are so light and their travel so minute that it is difficult to detect any movement when the apparatus is in operation.

Fleetwood exchange has an ultimate capacity for 920 subscribers. The whole of the service is automatic, the nearest operator being at Blackpool (a distance of 8 miles); even trunk calls, which are negotiated *via* Blackpool, are set up automatically at Fleetwood.

The new automatic installation experiences no difficulty in meeting the many and complex demands of the service with far greater precision and speed than could be attained by human agency. The operator's usual salutation "number, please," is replaced by a humming tone audible on the line within a fraction of a second of a caller lifting the receiver. The Fleetwood caller then delivers the number required, rotating the numbered dial in the approved fashion. The connection is established and a signal indicating the ringing of the distant subscriber's bell is distinctly audible the moment dialling is completed. The entire operation of establishing connection with the number dialled is effected almost instantaneously. The connection is severed with the same speed on the conclusion of conversation.

The Post Office has now 13 automatic exchanges in use, and in due course others will be added.

General.

Mr. William Law, deputy borough engineer at South Shields, has been appointed borough engineer at Yarmouth, at a commencing salary of £700 a year.

The death occurred, on August 22, of Mr. John Bryce, F.R.I.B.A., 131 George Street, Edinburgh. Mr. Bryce was elected a Fellow in 1879, and retired in 1908.

The Doncaster Board of Guardians on Saturday instructed Mr. Morton, architect, to prepare plans for the extension of the Poor Law Institution Infirmary, at an estimated cost of £67,212.

The Manchester Local Education Authority have given formal notice of their intention to provide a new public elementary school for about 300 girls at St. Joseph's R.C. Central School for Girls.

The Dunmow Rural Council have decided to purchase a site for sewage disposal works, and a water supply scheme was also referred to as being necessary. The total estimated cost, it was suggested, might be £40,000.

The Great Central Railway Company have accepted the tender of Messrs. Long & Henningway, of Doncaster, for the initial work of renewal of the New Holland pier at a cost of £39,240. The contract covers the strengthening, by means of cast-iron cylinders of twenty-one bays in the existing structure.

† Mr. Thomas Adams, F.S.I., and Mr. Longstreth Thompson, B.Sc., have entered into a partnership as town planning specialists at 121 Victoria Street, Westminster, S.W., and New York. The firm will act in close collaboration with Messrs. Thomas H. Mawson & Sons, architects and landscape architects, Lancaster.

Mr. Arthur Harrison, F.R.I.B.A., died suddenly on August 22 at his cottage at Welford-on-Avon. He was born in Nottingham in 1862, served his articles with Messrs. Martin and Chamberlain, commenced practice on his own account in 1888, and at the time of his death was senior partner of the firm of Messrs. Harrison & Cox, Colmore Row, Birmingham. His work, both as an architect and draughtsman, was well known in the Midlands, where he was prominent in many local activities.

Mr. Peter Stuart, known as the "Granolithic King," has died at Brighton at the age of eighty-five. He was the inventor of

granolithic paving and building stone, which has been used all over the world. The Germans also used his patent in converting Heligoland into a "Gibraltar." Mr. Stuart's forebears owned estates in Scotland which contained red granite, and it was Peter's knowledge of this stone that led him to invent granolithic. The Stuart family were the engineers of Balmoral Castle.

The Ministry of Transport announce that the preparation of the surveys for the proposed new arterial road connecting Manchester and Liverpool is now in hand. The task has been entrusted to Major H. E. Aldington, A.M.I.C.E., who has for two years past been acting as Deputy County Surveyor to the Cornwall County Council. Major Aldington has had wide engineering experience in England and the colonies, and served during the war with the railway construction troops overseas.

The action of the Glasgow Corporation in placing a contract for tramway steel rails with the American Steel Corporation when British firms were within £3,000 or so of the price accepted is causing much comment in the iron and steel industry, in which there is a large amount of unemployment. It is regarded as bad national and local economy. The American tender was for £15,335. British firms competing were Hadfields (Ltd.) (£18,262), Edgar, Allen & Co. (£18,549), and Titan Trackwork Company (£18,624).

The famous "Emperor Bell" (Kaiserglocke) of Cologne Cathedral, which was cast from the metal of French cannon captured in 1870 and melted down for munition making during the recent war, is to be replaced by a bell which will be called the German Rhine Bell. The new bell will be 11 feet in diameter, will weigh 25 tons, and is to be given the tone of C. It has been cast at Thuringia in a special furnace. It will be inscribed "The gift of the German nation, the Prussian Government and the citizens of Cologne."

Out of respect to the late General Collins, the Dublin Building Trade Employers' Federation decided to defer the notice of a reduction in wages for one week from Monday last. Mr. Hogan, acting Minister of Labour, met the representatives of the employers and workers on the 24th ult., at the Government buildings, with a view to negotiating a settlement. Twenty thousand men were going on strike on Monday if the notices were not postponed. The proposed reduction is 4½d. per hour from tradesmen, and 3½d. per hour from labourers.

The Dean of Chester's innovation of a free and open cathedral continues successful from a financial point of view. For the past seven months £75 more has been placed in the offertory boxes than during the corresponding months of 1921. The Restoration Fund now has reached £11,000, of which £10,000 will have been spent by the end of September. The other £1,000 has reduced debt from £3,000 to £2,000. By mid-summer, 1923, the Dean wants to obtain another £5,000. The next portion of restoration to be taken in hand will be the North Wall of the Cathedral.

Colwyn Bay Urban District Council have purchased Victoria Pier from the liquidator of the company for £4,750. The pavilion was gutted by fire on March 26th this year, the pier structure being only slightly damaged. The Council are negotiating for land on the promenade for prospective winter gardens and other amenities, and have asked local architects for competitive designs for a town hall and municipal buildings. A private syndicate have prepared plans for a new opera house. Plans were submitted at the last Council meeting for two streets and sixty houses, to be erected by private enterprise.

A dispute between the operative builders engaged on the erection of houses for the District Council at Droylsden on the question of payment for "walking time," which had held up the work for some months, has been terminated. The matter was referred to arbitration, the result of which is that no "walking time" is to be paid to the operatives residing in Droylsden, but the Council are given a discretionary judgment in regard to the men who reside outside. The operative builders had claimed 1s. 2d. per day travelling expenses. It was stated during the arbitration that 90 per cent. of the operatives resided in Droylsden.

Sir Robert Lorimer, A.R.A., R.S.A., Edinburgh, has been appointed by the Paisley Abbey Restoration Committee to succeed the late Dr. P. Macgregor Chalmers, Glasgow, as architect for the completion of the Abbey Restoration Scheme. The present restoration scheme was inaugurated ten years ago. Since then the chairman of the committee, the builder, Mr. Taylor, and the architect, Dr. Macgregor Chalmers, have all passed away, and the operations on the fabric had to cease under a Government Order in January, 1918. It is hoped that no time will now be lost in the completion of the work. Sir Robert Lorimer is the designer of the Paisley war memorial to be erected at the Cross.

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The Limits of Architecture.

Where does the function of the architect begin and end? The question has been differently answered at different periods, and the inquiry may not be without interest at a time when the profession is more conspicuous in the Press than ever before.

An architect, says "The Oxford Dictionary," is a master-builder. Well and good. But what of Ruskin's saying that "no person who is not a great sculptor or painter *can* be an *architect*. If he is not a sculptor or painter, he can only be a *builder*." "Absurd," we cry; "why, some of our best architects have never handled a brush or a chisel." This, to-day, is perfectly true; but historically speaking—omitting the century before Ruskin wrote—his statement, strange as it may seem, is accurate enough. Pheidias was a sculptor; Callimachus, inventor of the Corinthian capital, was a sculptor; Vitruvius was an engineer, and, by his own account, an unsuccessful architect; Giotto was a painter; the Cosmati workers in mosaic as well as architects; Michael Angelo both painter and sculptor; Carlo Fontana was a pupil of Bernini; Carlo Maderno a stucco worker before he turned to architecture; Bernini himself was the greatest sculptor of his century. We cannot dissociate Gothic sculpture from Gothic architecture any more than we can think of Pheidias apart from the Parthenon; and how long this union of functions lasted may be seen alike in France, Italy and England. Soufflot, architect of the Pantheon, Adam and Piranesi—more typical names could hardly be chosen when we come to eighteenth century art: the first was a superlative draughtsman; the second an admirable painter, as his drawings in the Soane Museum bear witness; the third a consummate etcher. Wren, it is often forgotten, was a master of the pen, whose anatomical studies and drawings of insects, overshadowed now by his architectural achievements, were highly valued by men of science from Charles II. downwards, though, unlike his predecessor Stone and his contemporaries, Pierce, Cibber and others, he did not himself act as sculptor or mason. A generation later, when Wren's greater work had laid down, by example rather than precept, that the function of an architect was design, that word design was far more liberally interpreted than it has been of later years. Gibbs was responsible for the Radcliffe Library and for St. Martin's-in-the-Fields, but he was also responsible for numerous tombs and monuments which were carried out by Rysbrack and others from his drawings. Adam, in the same way, designed various monuments which were executed by sculptors under his direction—those at Kedleston, for example; that by Vangelder at Warkton, illustrated in our series of Studies of the English Sculptors; and Flaxman's architectural ambitions are familiar to readers of his life.

There is, then, much more truth in Ruskin's statement than appears at first sight. The greatest architects of the past have generally been craftsmen in one way or another, and after a century and more, during which the arts have been divorced—a century less conspicuous for good building than any other since Charlemagne—Ruskin, that now largely dis-

credited Organ Voice, would have rejoiced to see in how many War Memorials the old union of architect and sculptor has been revived. It is rather the way of Gibbs and Rysbrack, Adam and his sculptors, than that of the actual sculptor-architect like Stone, that has now taken on a fresh lease of life; but that this is an improvement on the ways of our immediate ancestors few can doubt. There is nothing more depressing in our guide-books than the frequently recurring statement that such and such a screen or reredos was carried out by Messrs. Blank & Co. from the designs of Mr. Nameless; such memorials as we have alluded to will, at least, avoid such solecisms, and so bring back the close association of architect and craftsman, if not that of the architect-sculptor himself. And if architecture is, as "The Oxford Dictionary" defines it, "the art or science of building or constructing edifices of any kind for human use," the more the architect knows at first hand of the processes which he will be called on to use the better. Nothing else will be so likely to keep him from the fatal error enunciated by Sir Gilbert Scott in 1879: "Architecture, as distinguished from mere building, is the decoration of construction." The truth is, that the decoration of construction is not, and never can be, architecture. If it were, George Richardson and Cipriani would be architects, since the one published many books of decorative designs, and the other executed many charming ceilings in paint and stucco; nay, Angelica Kauffmann herself would be an architect, as witness the ceilings of the Royal Academy and the walls of many English houses.

Nothing, indeed, should be more forcibly impressed on the student of architecture than the value of a handicraft of any kind. Drawing, indeed, is always taught, and is of the highest importance; but modelling, even of an elementary order, painting, carving, all help—though not all in an equal degree. That is a matter for the individual. But to be able to express yourself in more than one medium is of priceless value, and anyone who has the chance of seeing the master of another branch of art at work should make the best of his opportunities. The budding librarian, whose work lies wholly among books, is now taken to inspect a printing press at work as an indispensable part of his training under the new school of librarianship; how much more necessary is it for the architect to see the sculptor's work, the engineer's, the decorator's? The old system reacted on the sculptor as it did on the architect; he discussed the work with its designer; nay, the very lettering of the inscription was his charge, as Pope's letter to Bird about the Guelfi statue, illustrated in our number for August 18, shows. It is much that the requirements of the War Memorial and the growing appreciation of the fact that architecture is not "the decoration of construction" have brought back something of the old relation between architect and sculptor; and if it is too much to hope that Ruskin's definition of the architect can ever again be true, owing to the modern development of the specialised function, we may hope that Scott's error has received its death-blow.

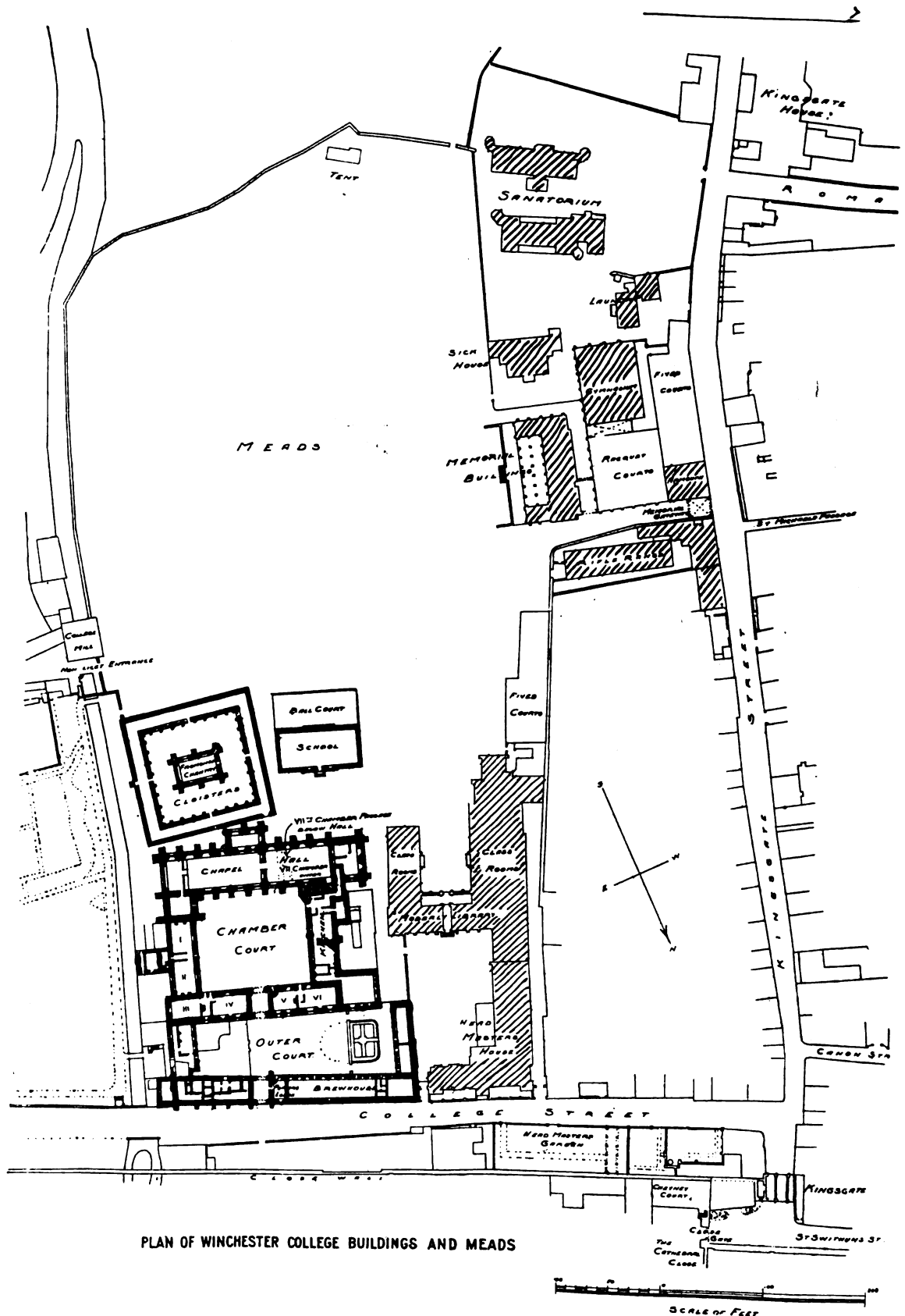
Our Illustrations.

LLOYDS BANK, EASTBOURNE, AND A HOUSE AT WORCESTER PARK. HORACE FIELD, Architect.

WINCHESTER COLLEGE.

We commence a series of views of Winchester College, which was founded by William of Wykeham in 1382, and thus is the oldest of all our great public schools. The first stone of the Chapel was laid in 1387, and the buildings were occupied in 1396. Besides the 70 foundation scholars in the older college buildings there are 350 commoners living in various masters' houses. The finest of the old buildings is the Chantry Chapel surrounded by Cloisters, and this was long used as a Library. The old School Room is a most interesting example of the earlier or freer period of the English Renaissance. Like the Colleges of Oxford and Cambridge, Winchester is remarkable for its picturesque harmony

rather than the outstanding distinction shown in its architecture. Like them, it has been a hallowed place for many generations, and carries with it many of those associations which are most precious to our race. We had intended to make this the first of a series of illustrated articles on the great English Schools, but on further and fuller consideration came to the conclusion that comparatively few among the greater schools lent themselves to illustration in an architectural paper as Winchester and Eton undoubtedly do, and for that reason such a series, interesting as they would be, would be more appropriately treated elsewhere.



PLAN OF WINCHESTER COLLEGE BUILDINGS AND MEADS

Notes and Comments.

A Buried City in South America.

Vast ruins of an ancient city, or collection of villages, hitherto unknown, have been uncovered in Colombia by the South American Archæological Expedition of the Field Museum of Natural History, Chicago. The ruins are in the Province of Magdalena, 40 miles from the Caribbean coast and 20 miles south of Santa Marta, a region now uninhabited. It is evident that this was once one of the great centres of population of the world, but to-day even its name is unknown.

Dr. O. Mason, the leader of the expedition, has sent the following message regarding the discoveries:—

"There must have been a tremendous population here at one time, as the country is covered with house sites. The region is very mountainous, and the houses, which were of wood, were built on terraces made with retaining walls. In the centre of each terrace there are entering steps of beautifully-cut stone, and, if the main path is far below, other steps are built to connect the terrace with it. The principal place where I have been working has a staircase of 48 steps, all made of nicely-cut quadrangular stone slabs. Instead of the Indian road, of which I have heard, there are thousands of them all through the mountains. There are apparently wide roads connecting the main sites. All are paved with flat water-worn rocks of more or less uniform size, the small paths being a single line of such stones, while the more important roads are 4 feet or more wide and edged with upright stones. When the way ascends or descends the stones are set as steps. On the side of almost every house there can still be found the metate, or grinding slab, on which the family ground its corn."

We suppose that the least known portions of the earth are now the northern part of South America and portions of the Indo-Chinese peninsula in Eastern Asia, and that it is from these sources that the greatest future discoveries of interest are to be found.

An Interesting London Proposal.

Two consulting engineers, Mr. F. Rings and Mr. T. C. Hood, have brought forward an interesting proposal which in some form or other might be reasonably considered as being worthy of careful discussion. Their thesis is that the Thames is spanned by comparatively few bridges leading to great concentration of traffic at a comparatively small number of places, whereas if a ferro-concrete platform or raft were formed in the centre of the river, with waterways on either side of about 120 feet wide, these waterways would be ample for all purposes of traffic while a large space on the raft would be available for building, which might be arranged in terraces or for public gardens, and the shorter bridges needed on either side would make the linking up of the two sides of the river correspondingly inexpensive. While we should be sorry to see such a scheme adopted from East to West of London we are not sure that some midstream islands at points in the river might not prove both an æsthetic improvement and a convenience, and it is probable that the site values created would pay the expenses of construction and leave a handsome profit. The engineers claim that existing bridges might by the adoption of their scheme be relieved of all slow and heavy traffic, for which the new crossings would be available.

The Cost of Housing in Scotland.

The Honorary Secretary of the Edinburgh Architectural Association, writing to the "Scotsman," deals with the apparent anomaly that housing in Scotland costs more than it does here and that a house in Glasgow would cost £500 while similar accommodation could be erected in an English town for £300. He says the reason is that the two cases are not in reality similar, as the Scottish worker objects to the small size and lower heights which suffice for England. Here we have the crux of the question, which seems to us to be this: We are either right or wrong in England in holding that a room 8 feet in height is perfectly

hygienic and that certain areas of rooms are sufficient for bed and living rooms. If we are right and the State is paying a large proportion of the bill on the understanding that workers cannot do without such help, the authorities are wrong in yielding to prejudice and giving more. If the Scottish worker does not like the result it is open for him to provide himself—if he can—with what he does want at his own expense, but obviously wrong to expect the State to pay for what are clearly luxuries and not necessities.

If a man is the guest of the State in a workhouse or a prison he is not asked what accommodation he prefers or given choice of the various items of a bill of fare, and while the occupant of State and municipal housing is not in the same enforced position, some of the same arguments apply. The question is what is necessary not what would be preferred, and it is this question which should be logically answered.

A Temporary Official's Little Dwelling.

The British High Commissioner for Irak, or, as we prefer it, Mesopotamia, who will presumably not be there for long, has, according to newspaper reports, been having a little house built for himself out of the public funds which will only cost £135,000. It is understood that the Colonial Office and the War Office agree that this charge is not one that can be properly included under War Office expenses. The sum stated is said to include the expenses of the purchase and adaptation of an existing building, but it somehow suggests that Sir Percy Cox or his advisers have been studying the Arabian Nights Entertainments and have allowed gorgeous pictures of Eastern magnificence to colour their imaginations; or, on the other hand, Sir Percy may have a large family. Such little items are soothing to those who pay for them as it proves at least that we are getting something for our money and that Sir Percy should have ample room for his possessions. We should much like to give illustrations of this little official housing scheme.

Building By-Laws.

We are receiving reports from every quarter which show the keen interest taken in the suggestion that building by-laws all over the country should be amended and brought up-to-date. It seems to be confidently anticipated that such amendment would result in a cheapening of building, but we doubt whether there is much foundation for the belief. It is true that building by-laws might be so far relaxed as to permit the erection of what are now classed as temporary buildings as permanent ones, but this would be a retrograde and regrettable movement. As a rule we are not inclined to write of building by-laws as being too stringent, but to regard them as being much too rigid. The local surveyor or engineer is often so bound by their precise phraseology as to be unable to sanction what he knows is both sound and reasonable construction. We should like to see it made possible to take special cases involving infringement of by-laws but meeting their obvious intention to a higher authority which would have powers to give special sanctions. We are sure that the average official wants to help, but the power to do so is not his. But the standard of building required all over the country is not too high anywhere, and it would be very mischievous if it were lowered.

The Ministry of Health will hold an inquiry into the proposal of the Liverpool Corporation to purchase the site of the old pro-Cathedral Church of St. Peter, closed for public worship three years ago, at £235,000. The site is in Church Street, one of the principal thoroughfares of the city and the chief shopping centre. Two years ago it was reported that Messrs. Harrods had arranged to buy the site for a quarter of a million for a big store, but the scheme fell through. Other attempts to sell having failed, the Corporation agreed to buy in the spring of this year, notwithstanding considerable opposition on the ground that commercially the purchase price was too high, and, further, that there was no necessity for acquisition by the city authority. The vendors are the Ecclesiastical Commissioners.

The World of Art.

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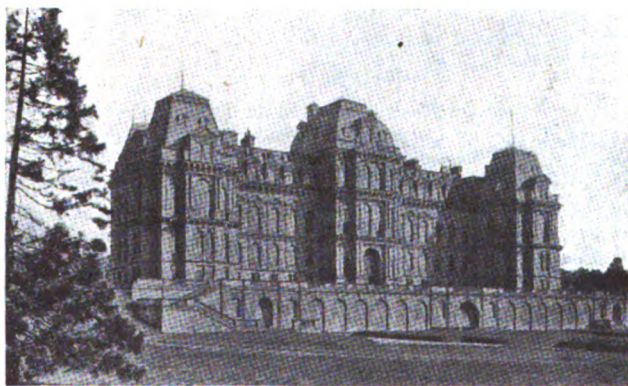
One of the most important provincial collections in England, and one which is scarcely yet appreciated as it deserves, is the magnificently housed collection at Barnard's Castle, in the County of Durham, which is known as the Bowes Museum.

Barnard's Castle goes very far back into English history, its ancient castle having been founded by Bernard Baliol, and dating from the twelfth century; the town, therefore, with its clean, broad streets and prosperous air, was obviously one of those which grew up outside a great feudal stronghold; and this Bernard Baliol, who gave to both castle and town his name, was son of Guy Baliol, one of the knights who fought beside William of Normandy at Hastings, and grandfather of the John Baliol who, in the reign of Edward I., laid claim to the throne of Scotland. Edward I. handed over the confiscated estates of the Baliols to the Earl of Warwick, and two centuries later, by the marriage of Anne of Warwick to Richard III., the castle came back for a time to the Crown. Though now little more than a picturesque ruin, covering a very large space of ground, one of the best-preserved portions is the window, still called Richard III.'s window, from whence there is a wonderful view of the surrounding country and the beautiful stream of the Tees; and I was interested to find on the wall of an old house in the town the figure of a "boar passant," which was the cognisance of Richard III., and had no doubt come originally from the castle. In 1569, at the time of the "Rising of the North," the castle held out stoutly for eleven days against the Earls of Northumberland and Westmoreland, being commanded for the Crown by Sir George Bowes, who, through disaffection within, was obliged to capitulate, and marched out with military honours.

The Bowes Museum, erected between 1869-75, by the late John Bowes, of Streatham Castle, and his first wife, the Countess de Montalbo, is a magnificent building of stone in the style of the French Renaissance, from the designs of M. Pellechet of Paris. The building, of which I here give an illustration, is four storeys in height, including the basement, and stands very effectively on a balustraded terrace, looking over the fine gardens which stretch beneath. In its design, position and surroundings it is really a noble building, worthy of any capital of Europe; and I was astonished to find it in this little country town of Durham. The south, or principal, front, overlooking the terrace, is 300 feet in length, with a general elevation of 80 feet, whose effect is heightened by an advanced block containing the principal entrance; and the building has the immense advantage of having been primarily designed for a Museum, and to accommodate the actual collection which it now holds.

Coming now to the contents, though in some cases a little more selection might have been desirable, on the whole they are worthy of the superb manner in which, by the generosity of Mr. John Bowes and his wife (herself a very accomplished artist) they have been housed.

The features which undoubtedly stand out in the collection are the tapestries, the porcelain and china, and the paintings, more especially those of the French, Spanish and Italian schools.



BOWES MUSEUM, BARNARD CASTLE.

The tapestries hung on the walls of the entrance hall and first floor include the series of the Story of Troy, with some fine Flemish pieces; and a collection of casts of Greek sculpture, which have been, I gather, added more recently, stand out well against the dim, rich Flemish tapestries. But the most valuable feature, from a money point of view, if not also artistically, of the whole collection must, I imagine, be the china and porcelain. These fill three rooms of the first floor with really priceless pieces of Sèvres and other French china—Dresden, Berlin, Delft and old Chelsea ware. The two large Sèvres vases alone, with the first hunt meeting of Louis XV., delicately painted against that wonderful blue, represent a very high money value, probably as much or more than the tapestries, which have been valued at £50,000, and were considered the second best private collection in England. But what interested me specially, as a student of the French Revolution period, among the Sèvres vases was that one which contains three exquisite portraits of Louis XVI., Marie Antoinette, and her beautiful and ill-fated friend, the Princess de Lamballe. Carlyle has described, in words of flame, her terrible end in the September massacres. "She too is led to the hell-gate,—a manifest Queen's friend. She shivers back at the sight of bloody sabres... but there is no return—Onwards! That fair hind head is cleft with the axe, the neck is severed. The fair body is cut into fragments; with indignities and horrors... She was beautiful, she was good, she had known no happiness." The portrait here shown is of a young and singularly beautiful girl, her hair crowned with roses; it is exquisitely painted (evidently a royal commission), and is the only portrait I have seen of one whose fate must fill us with pity and horror.

I come now to the paintings, which are a fine, though unequal, collection. I found some good Italian paintings, notably the portrait of a man, dressed in black, by Domenico Caprioli, dated MDXXVIII; and the superb figure of a male saint in armour by Domenichino, who is obviously S. George, as in the background he is seen rescuing the maiden and making things very unpleasant for the dragon. But perhaps the most important paintings here are the three Goyas, one of which, the "Interior of a Prison: an Incident of the Inquisition," is still on loan in the National Gallery. The others are two portraits, one of an old man with white hair, and dressed as a priest, who is described as "The Painter's Brother." The other is inscribed, "A Melendez Valdes, su amigo Goya, 1797." This is a magnificent portrait, and an unquestioned work, included by Señor de Beruete among his illustrations of Goya portraits. Melendez Valdes was a poet and writer, who lived in Madrid, from 1781, on intimate terms with Jove Llanos and his group of intellectuals, with whom Goya, too, was in touch. Other Spanish paintings by Zurbaran and Careno de Miranda are of importance; and there are some good Dutch works by Van de Velde, Van Goyen, Teniers, Nicholas Maes and Van der Meer, and a room devoted to French art of the last century. In sum a collection of merit and interest, but which badly needs judicious weeding: but the whole Museum is a national asset of very great value and importance.

I am glad to see that the Faculty of Arts are organising an Exhibition of Commercial Art and Design, to be shown at Messrs. Willing's (King's Cross) in October, and to include posters and pictorial and photographic advertisements. I alluded recently in these columns to the question of provincial exhibitions, and had recently the opportunity of meeting in London the Secretary of the American Federation of Arts, and of having some interesting talk about this organisation, which has successfully been running a series of art exhibitions which have covered the main cities of the United States, have paid their way, and been of real service to art on that side. It is worth considering whether such an organisation might not be started with us, for, as I have already said, I believe there is the opening ready if taken in the right way; and I am glad to see that Amelia Defries, who has been associated with the American Federation of Arts, seems to be taking some steps already in this direction.

S. B.

Modern Methods in Building Construction.—XXXII.

By Albert Lakeman, M.S.A., M.C.I.

FORM WORK—(continued).

There are some types of form work which will come under a special heading as apart from the ordinary general class of work wherein the forms are needed for beams, columns, slabs, and straightforward concrete walling.

One of these will be that in connection with the construction of machinery foundations, motor beds and pits, and all kinds of drainage trenches in factory work. It is quite impossible to use metal forms for this work because the arrangements and dimensions will be governed in each instance by the bedplate of the machine, the size and position of the holding down bolts, and the miscellaneous chases and sinkings that will possibly be necessary.

This form work is usually complicated, and much ingenuity is required to execute it in a satisfactory manner, while absolute accuracy is of primary importance. A method frequently adopted in work of this nature is to prepare a large scale drawing with figured dimensions of all the concrete work for the use of the foreman carpenter, who schemes out the best way of constructing the forms to suit without the aid of form work drawings, but this practice is merely a way of passing on a difficulty to someone else, and although full advantage should be taken of the experience of the practical man in the field, some guidance should be given to him when the work is of any magnitude.

Although it may seem of minor importance, some attention should be paid to the method of constructing the bolt boxes in machinery foundations, because money is frequently wasted in this direction. It is not uncommon to see the work executed in a manner which makes it practically impossible to draw these bolt boxes after the concrete has set, and either tedious cutting out in small pieces or burning out is resorted to. These boxes must be tapered toward the bottom to facilitate removal or they must be of a collapsible type which permits the drawing of one portion that sets the remainder free. When a large amount of repetition work has to be carried out it will be economical to make the bolt boxes in a substantial manner, and of a type suitable for easy withdrawal to allow re-use on many occasions.

Another type of form work that requires special care in execution is the kind which may be termed "climbing" as it is carried up stage by stage with the work by taking off the lower sections and refixing at a higher level, without any direct support from the ground level other than that afforded by the completed portions of the structure. An example of this kind is afforded by a reinforced concrete chimney stack, grain silo or other comparatively high structure.

This type of form work is very liable to become distorted or out of the perpendicular, as a small error will become increased at each successive stage unless it is noted and care taken to correct the line immediately. In the case of a circular stack, for example, the forms may be, say, half an inch out of plumb and the concrete work will therefore follow this line, and if the work is not carefully checked and the next stage is fixed to this concrete it will naturally follow the same inclination, and the movement from the vertical in the two stages will become one inch. It will be realised that such an error will become very serious if overlooked in the following stages in a high stack, and in one example that came under the author's notice a stack was executed in this way, and at one point the error had increased to 5 inches before it was observed, owing to carelessness and indifferent supervision, and it was due partly to the effect of a strong prevailing wind in one direction. When observed the forms were gradually worked back to the vertical, and the result is a stack which is concave on one face and convex on the other.

In this type of work there is also a danger of the shape becoming distorted on plan whereby the true circle is lost and a form approaching an ellipse is constructed owing to the lack of rigidity and the absence of any definite checking.

This difficulty can be overcome by the use of well designed and constructed forms, but it is a point which appears to be overlooked on some schemes, with the result that the work will not bear a close inspection when finished, and bad repute follows. In the case of a chimney stack, the verticality and accuracy of the concrete work will affect the firebrick lining, and it will be too late to remedy the error when the concrete has set and the lining work is commenced. All types of climbing shuttering are open to the possibility of defects in the accuracy of the finished work owing to the very nature of the way in which they are applied, and for this reason great care must be exercised in their use. Some of the climbing forms used for walling, while apparently very economical in labour are deficient in stiffness, and special struts and posts must be introduced if a true line is to be maintained. Immediately these special precautions have to be taken the economy is lost, and ordinary forms can be employed satisfactorily.

In the case of tall stacks the amount of work that can be executed in one day will be limited, and any restriction imposed by the use of the climbing shuttering will be of little importance, because it will be advisable to avoid executing a large portion of the height in a short time, and the shuttering can usually be removed in the lower section for re-use higher up without danger to the concrete by the time the men are ready to deal with it. The conditions under which the work has to be carried out are difficult, and the working space is limited, and it is therefore not profitable to employ a large force of men in an attempt to gain speed. The best method is to employ a few men who can be kept constantly engaged in the various operations of erecting the forms, placing the steel, and depositing the concrete. As the work proceeds and the height from the ground is increased considerably, the concrete will need to be hoisted up in comparatively small quantities, and this will entail extra labour and loss of time, but with a small gang of men only to keep going at the concreting level this will not be a serious matter. The work needs to be well executed, and the concrete must be thoroughly tamped into the forms and around the steel, and it is advisable to give the men employed plenty of time to ensure this being done.

There is one other class of form work which is of a special nature, and which is also essentially the outcome of a modern development in concrete work—viz., forms for pre-cast concrete. This kind of form work in some respects is much easier to construct than that for *in situ* concrete, because it can be dealt with at ground level, and generally the work can be cast in a flat position, which eliminates the necessity for special strutting. These forms are made for various constructional members ranging from fence posts to complete roof trusses, and during the war the whole of the component parts for the complete building in many schemes was pre-cast, and afterwards erected in a manner similar to that adopted for steel-framed structures.

In this pre-cast work the forms require to be specially designed to allow their re-use innumerable times, because the members will be a repetition of one another, and a large number will be made before the work of erection is commenced in order to get the concrete sufficiently matured before handling. In the case of a reinforced concrete roof truss, the form will consist of boxing which is laid flat on boarding without top or bottom, and the whole of the reinforcement will be assembled in the form of a framework and placed complete inside this boxing ready for concreting. When the concrete is sufficiently hard the shuttering will be removed and replaced on the top of the truss already cast, with a layer of suitable paper over the green concrete to prevent adhesion with the new concrete that will be later filled into this re-fixed shuttering. The steel for the next truss is then placed in position, and the concrete is again deposited, and the operation is repeated until a stack of trusses has been made up to a height which prevents economical working if the stack is carried further

and a new stack is then commenced. In this way the work that has already been cast forms the base for the truss being executed, and once the true outline for the first truss is established the form is placed to follow this line for subsequent trusses with the minimum labour. The use of wedges, bolts or suitable clamps only for connecting the different parts of the form are absolutely essential, as any nailing or spiking will prevent easy removal and result in damage to the green concrete and the form itself. Piles, columns and beams can all be cast in this manner, but it is often more economical to make a level platform, and on this place planks on edge with small filling pieces at the ends for the concreting of simple parallel sided members. The forms must be thoroughly cleaned each time before re-use, and the surfaces should be treated with a linewash or a coating of suitable grease or oil to reduce the adhesion between the concrete and the timber to a minimum. Before the concrete is placed in any form care should be taken to ensure that the inside is clean and free from dirt or rubbish of any description, more especially if any repairs or work on the form has been executed when putting same in position, as sawdust and shavings are frequently left inside by the workmen. A point that is often discussed is that in connection with the finish of the form work when timber is employed as to whether or not this should be wrought or left straight from the saw. In all forms for pre-cast work where the surfaces are to be left unplastered it will probably be advisable to prepare the surface to give a smooth area against the concrete, because cleaner castings will result, and removal and subsequent cleaning will be facilitated. In any special work where a very clean appearance is desired it will also be necessary to plane up the boarding, but for all general work, whether plastered or not, the forms can be made up with rough boarding, and if the concrete is well tamped into the shuttering the resulting concrete surface will be quite good. The use of wrought boarding on an extensive scheme will add considerably to the cost, and under ordinary circumstances the extra cost cannot be justified.

It is difficult to give a definite statement of the cost of form work for reinforced concrete work, because it will be found to vary on every scheme according to the nature of the structure and the conditions of working, but it will be found to be an important item in the total cost of the whole building.

On several schemes the author analysed the cost of the reinforced concrete work to find the comparative cost of the concrete, the reinforcing steel and the form work, and it may possibly surprise some readers to know that if the total cost of the reinforced concrete work is taken as 100 per cent., then the actual concrete on an average cost 51 per cent. of the total, the reinforcement cost 25 per cent. and the form work cost 24 per cent. The figure will vary, and this percentage must be taken as a general guide to the average only, but it will be sufficient to indicate the importance of this section of reinforced concrete construction, although it is only of a temporary character and constitutes no part of the finished structure. The contractor is in the position of having to expend 24 per cent. of the total cost on work which is not handed over to the building owner, and he can therefore execute this work in any way he considers the best, provided the end achieved is satisfactory. All form work is practically a modern development in construction methods, and there are therefore no rule-of-thumb ideas originated by the past generation to hinder the application of up-to-date methods on the design and execution.

Unfortunately, this type of work has been left to develop without much guidance from those who are experts in the permanent structure itself, and the evolution of any recognised standard arrangement, even where this could be profitably employed, has not been achieved. Individuality will probably be found to exist in the application of form work to a greater extent than in any other branch of modern building work, and while the results are excellent in many cases, it will be apparent that in many others they leave much to be desired. The standardisation of reinforced concrete for typical structures would save much time and

labour, and if this was allied to standardisation of form work the result would be a reduction in the cost without any risk of defective work through inexperience in the design of this part of the scheme, and the use of metal forms would become a practical and economical proposition.

(To be continued.)

PART I.—I. Introduction, Steam shovels, Jan. 13; II. Steam shovels, Trench diggers, Jan. 20; III. Grab buckets, scrapers, Jan. 27; IV. Drag-line excavators, Feb. 3; V. Derricks and cranes, radial loader, paving-breakers, Feb. 17; VI. Surplus Soil Transport (Hand Labour), Feb. 24; VII. Surplus Soil Transport (Horse-drawn wagons, Steam-driven wagons), Mar. 3; VIII. Surplus Soil Transport (Steam-driven wagons), Mar. 10; IX. Surplus Soil Transport (Steam-driven wagons, Petrol wagons, Narrow-gauge track with wagons), Mar. 17; X. Surplus Soil Transport (Narrow-gauge track with wagons, Trucks on Standard-gauge track, Electrically-driven trucks and vehicles), Mar. 24.

PART II.—XI. Foundation Work (Ordinary soils, Soft soils), April 7; XII. Foundation Work (Soft soils), April 17; XIII. Foundation Work (Soft soils), April 21; XIV. Foundation Work (Soft soils), April 28; XV. Foundation Work (Soft soils), sheet piling, May 5; XVI. Foundation Work (Soft soils), steel-sheet piling, May 12; XVII. Foundation Work (soft soils), steel-sheet piling, pumping, May 19; XVIII. Foundation Work (Soft soils), pumping, May 26; XIX. Foundation Work (soft soils), foundation piles, June 2; XX. Foundation Work (soft soils), foundation piles (cont.), June 9; XXI. Foundation Work (soft soils), foundation piles (cont.), June 16; XXII. Foundation Work (soft soils), Waterproofing, June 23; XXIII. Foundation Work (soft soils), Waterproofing (cont.), June 30; XXIV. Waterproofing (cont.), July 7; XXV. Water Supply, July 14; XXVI. Concreting, July 28; XXVII. Concreting (cont.), August 4; XXVIII. Concreting (cont.), August 11; XXIX. Concreting (cont.), Aug. 18; XXX. Concreting (cont.), Aug. 25; XXXI. Form Work, Sept. 1.

"The Architect" Fifty Years Ago.

SEPTEMBER 7, 1872.

WHAT IS A HOUSE?

The Rev. Matthew Woodward is building a church at Folkestone, and the authorities of the town consider it infringes on the roadway, which under their Act should be 40 feet wide. They attempted to restrain him from building, and several compromises which he offered were rejected. Under these circumstances he had the question proposed to counsel "Whether under the Folkestone Improvement Act the word 'house' includes a 'church'?" To this he received the opinion:—"It may, I think, be safely assumed that the present case was not foreseen by the framers of the Act, or they would have provided for it by some other and express provision either of direct enactment or of interpretation. I have come to the conclusion that the terms used do not comprehend this case."

The next question was a corollary to this:—"If the word 'house' does not include a 'church,' whether the Corporation of Folkestone have any power to interfere?" The opinion was similar to the former:—"Upon the supposition made in the query, and upon which I have expressed my opinion that it is well-founded, I am not aware of any power which the Corporation of Folkestone have to interfere in this matter."

Fortified by these opinions, Mr. Woodward says the course before him is plain—to proceed at once with the erection of the church; and accordingly the work is being pushed forward as quickly as possible. On the other hand the Corporation are no less determined to stand up for their rights, and, after a warm discussion, have passed a resolution to apply for an injunction to restrain the committee from proceeding with the building.

Fees on State-Aided Housing Schemes.

In view of the terms of Clause E (4) of General Housing Memorandum No. 61, issued by the Ministry of Health, the question of the setting up by the Royal Institute of British Architects of a Tribunal to deal with applications is under consideration. All Architects who wish to obtain the support of the Royal Institute under this Clause are requested to write at once to the Secretary, R.I.B.A., stating whether they are members of the R.I.B.A. or of one of its Allied Societies, or of the Society of Architects, or whether they are unattached to any Architectural organisation, and giving brief particulars of the cases in which they desire to be supported.

All applicants will be informed in due course if it is found to be necessary to require the payment of any fees to the Tribunal.



Messrs. Wadkin & Co's New Engineering Works, Leicester.

The design for Green Lane Works, Leicester, has been prepared with the object of providing the most up-to-date and adequate accommodation possible in all the varied departments of the woodworking machinery engineering industry.

The general lay-out occupies an open site eight acres in extent, within half a mile of the M.R. and G.N. stations, and close to the Corporation electric cars, factors answerable for the proprietors' choice of position both for the convenience of the workpeople and also the receipt and delivery of goods.

The plan includes an extensive administrative block of two floors built of 2 inch purple facing bricks in cement with portland stone entrance and dressings. A 20 feet span reinforced concrete bridge connects these offices with the second floor of the stores, which is a commodious building of brickwork in cement and reinforced concrete and adjoins the main works; a building designed in six bays 150 feet long by 32 feet wide, covered with an even span roof of slate and patent glazing, and each bay fitted with travelling electric crane. A central feature is the works manager's office, from which a complete view of the whole of the works

is obtained. The main flooring is of wood block. The usual lavatory block, electricity department, boiler house, etc., are planned on the whole of the west side, leaving the north and east boundaries available for future extensions.

The central heating arrangements are designed on the accelerated low pressure hot water system, which, for this class of building where long runs of mains are inevitable, is considered by the leading authorities on heating to be the most efficient and economical for this country.

The detached block shown on the illustration is the demonstration room with canteen adjoining.

The latest appliances for safety of workpeople are installed, and part of the site is prepared for athletics and caretaker's and foremen's houses.

The builder is Walter Potter; constructional steelwork by Gimson and Co., Ltd.; and heating by F. H. Rowlett and Son, all of Leicester. Reinforced concrete by Gray's Ferro-Concrete Company, Ltd., of Glasgow and London.

The present buildings form one quarter of the finished scheme.

The architect is Mr. W. R. Burtenshaw Mann, M.S.A., of 22 St. Alban's Road, Leicester.

By-Laws with respect to New Streets and Buildings.

The Ministry of Health has issued the following circular, No. 332, to Councils of Boroughs (outside London) and Urban and Rural Districts:—

1. I am directed by the Minister of Health to bring to the notice of your Council the urgent importance of revising any by-laws in force with respect to new streets and buildings if this has not recently been done.

There is still a large number of local authorities who for many years have not altered their by-laws, which in consequence are antiquated.

It cannot be too strongly emphasized that a local authority are not warranted in retaining by-laws which may hinder private enterprise and are not really required for safety or sanitation.

At present local authorities are able to give some measure of relief from inelastic by-laws by consenting to a building under section 25 of the Housing, Town Planning, &c. Act, 1919. It has to be remembered, however, that this provision is only temporary, and, in any event, is not a satisfactory method of affording permanent relief. Moreover, the section deals only with buildings for human habitation, not with commercial or industrial buildings.

2. The model by-laws as to new streets and buildings have been frequently revised, particularly in the light of the experience of local authorities; and the present models are markedly different from the earlier ones. While they secure all the safeguards which local authorities, in the interests of the community, can properly require under the authorising statutes, they afford a wide margin of elasticity; and the Minister would urge local authorities who have not already done so to revise their by-laws on the lines of the latest models.

The Departmental Committee on Building By-laws recommended that all by-laws with respect to new streets and buildings

should be reviewed at least every ten years; the Minister is inclined to think that this task should be undertaken at even shorter intervals in order that the local authority may be quite sure that their by-laws provide adequately for modern requirements.

3. The Minister will be glad to know what measures are taken in this matter by your Council, if their by-laws have not been revised since the beginning of 1914; and his officers will be glad to render any assistance which they can in any revision which soundertaken.—I am, Sir, your obedient Servant,

A. V. SYMONDS,
Secretary.

NOTE.

Copies of the model by-laws for drafting purposes can be obtained without charge from the Ministry. Extra copies of this circular and of the model by-laws can be bought directly or through any bookseller from H.M. Stationery Offices at the following addresses:—

Imperial House, Kingsway, London, W.C.2;
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The model by-laws on this subject are:—

Series IV.: The full urban model, for large towns, industrial areas, and other thickly populated districts:

Series IVa: The rural model (new buildings and certain matters in connection with buildings only) intended primarily for rural areas;

Series IVc: The intermediate model, for parts of rural districts which have become urban in character, or for sparsely populated and residential urban districts, small towns, etc.

Studies of the English Sculptors from Pierce to Chantrey.*

XX. John Bacon, R.A. (1740-1799).

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To write the life of Joseph Nollekens is so unnecessary after Mr. Whitten's edition of J. T. Smith's monumental work that we may pass without apology to the career of his contemporary, Bacon, the most prolific and the most fortunate sculptor of his day. Bacon was unlucky in his first biographer, Richard Cecil, a Nonconformist minister, whose unctuous tone is intolerable to our generation and is, unfortunately, reflected in the sculptor's own utterances, from the epitaph set up in Whitefield's Tabernacle, and repeated by all the biographers, to the dreadful specimens of hymnology and epitaph-writing given by Cunningham. To judge him fairly as an artist these things must be set aside, and, hard as it is to forgive him for offering to execute all the public monuments erected by the Government "at a percentage below the Parliamentary price," he must be reckoned, nevertheless, as the last of the great sculptors of the old tradition. "Spirit of Phidias," cried Fuseli, "Bacon is to do all the stonework for the navy and army—they ought also to give him the contract for *hams and pork!*" In point of fact, Bacon only did seven monuments in all in the Abbey and three in St. Paul's, and the usual total given of 15 out of 16 must probably include some by his son of the same name; but his actual output was enormous, and the only originality to which this paper can lay claim lies in the list of his works, more complete than any yet given, those by his son often ascribed to him being omitted.

John Bacon, the son of a Somersetshire clothworker, was born in Southwark on November 24, 1740. After an inferior education he was in 1754 apprenticed to one Crispe, a china manufacturer of Bow, for whom the boy modelled figures and painted plates until 1762, when he began to work for Coade of the Lithodipyra, or artificial stone—a Lambeth product which, being fireproof, was largely in demand for decorative purposes. A charming book of designs in the British Museum Print Room shows examples of his work, of which the *Charity* here given, once on an old charity school and now in private hands, is an example. Meanwhile Bacon was becoming known as a sculptor; he gained eleven premiums from the Society of Arts between 1758 and 1778, all for casts or models, and on the foundation of the Royal Academy entered himself as a student. In 1769 he received the first gold medal awarded for sculpture, his subject, like the first of Banks's Academy works, being *Aeneas* escaping from Troy; won a gold medal from the Society of Arts for his *Mars* and *Venus*, which, with a *Narcissus* which, like the others, was popular enough to be engraved, are still in the possession of the Society; and in 1770 was elected A.R.A. A commission for a bust of George III. for Christ Church from Dr. (afterwards Archbishop) Markham set him on the road to success, though he was wholly without the foreign training usual at the time, and his name was thenceforth famous. He was, it is said, successful in fifteen out of the sixteen open competitions for which he sent in designs; he wrote the article "Sculpture" in Rees' *Encyclopædia*, and was "a great help to Mr. Strutt in the compilation of his *Dictionary of Engravers*"; he produced admirable statues as well as busts and monuments; he invented the pointing instrument which superseded the old calipers, and presented one to Houdon, who subsequently tried to palm it off as his own idea; he produced a silver syringe to moisten his clay, and so avoided the uncourtly mouth-squirting of his contemporaries in the presence of Royalty; he "stuck,"



STATUE OF "CHARITY," BY JOHN BACON, R.A., EXECUTED FOR COADE'S FACTORY OF ARTIFICIAL STONE.

as he said, "to his mistress *Nature*"; and he made his fortune. It is pleasant to record that the first wife of this twice-married sculptor was an old love for whom a builder named Johnson, who had known him in his youth, provided and furnished quarters in Newman Street more fitting for a bride than the old shop in Wardour Street where Bacon had hitherto lodged. It is pleasant to add that, when this benefactor had become a banker, Bacon heard that a serious run on his house was expected, and furnished him with £40,000, which enabled him to weather the storm. He had, moreover, a shrewd perception of the gullibility of the public—"Call it but an antique," he said of a Jupiter of his own making, which had deceived the connoisseurs, "and people begin immediately to find some beauty"—and he had what was better still, a generous readiness to admire the work of others. No modern biographer has extracted from the minister Cecil's absurd pages the story of his admitting that his Chatham in the Abbey was based upon Roubiliac's *Eloquence*, though his noble praise of that work to the friend who pointed out the likeness is familiar; yet such things must be taken into account if we would get an honest picture of the sculptor, and forget the hostile insinuations of Cunningham on the one hand and the idolatrous unction of Cecil on the other.

We do not propose to reprint the long list of Bacon's Academy works, which are readily accessible in Mr. Graves's "Dictionary of Exhibitors," but to confine ourselves to the works themselves and the places where they may be found, though our list is probably very imperfect. All the works alluded to are sepulchral monuments, unless otherwise described.

Westminster Abbey.—1. William Pitt, Earl of Chatham. Bacon's masterpiece on a large scale, and still one of the most imposing works by an English sculptor.

* For preceding articles in this series see:—Introductory Article, July 1; Nicholas Stone (1587-1647), July 8; Edward Pierce (ob. 1698), Sept. 2; Caius Gabriel Cibber (1630-1700), Sept. 16; Grinling Gibbons (1648-1721), Sept. 30; John Bushnell (d. 1701), Oct. 7; Francis Bird (1667-1731), Oct. 21; Peter Scheemaker (1690-1771?), Dec. 9 and Feb. 10; John Michael Rysbrack (1693-1770), Mar. 3 and April 7; Louis François Roubiliac (1695-1762), April 21, June 16 and June 23; Joseph Wilton (1722-1803), June 30; Some Minor Sculptors, July 21, Aug. 11 and 18; Thomas Banks, R.A. (1735-1805), Aug. 25.

2. Thomas Gray. The Muse, her lyre beside her, holds a medallion of the poet; the relief, against a lyre-shaped background, is said to have been designed by Mason.

3. Mason, the friend of Gray; Poetry bending in grief over a medallion of the poet.

4. Brigadier-General Hope, with a beautiful mourning figure.

5. Admiral Sir George Pocock. One of his best and latest works, whose French manner is eulogised by Mr. Gosse. The figure of Britannia shaking a thunderbolt is a masterpiece, in a manner new to English sculpture.

6. George Montague Dunk, Earl of Halifax; bust supported by figures of children with the emblems of Truth and Honour.

7. Miss Anne Whittel.

St. Paul's.—1. Statue of John Howard, erected 1795, representing him in Greek dress, holding a key and trampling on fetters; the pedestal shows the visitation of those in prison. The epitaph was written by Bacon's constant patron, Samuel Whitbread.

2. Statue of Dr. Johnson in a toga reading from a scroll, without a wig, also put up in 1795, at the cost of 1,100 guineas. The epitaph is by Dr. Parr. It is said that these two unfortunate figures, placed on either side of the entrance to the choir, have often been mistaken for the statues of St. Peter and St. Paul. Bacon was for some reason not allowed to write R.A. to his name upon this work.

3. Statue of Sir William Jones, on a pedestal bearing a poor relief of "Allegory and Genius opening out Oriental Knowledge." A better work than the last two, and less spoilt by the classical dress than those two essentially eighteenth-century figures, Howard and Dr. Johnson.

Somerset House.—1. Bronze statue of George III.

2. Colossal statue of the Thames, which Queen Charlotte called "a frightful figure." Both in the courtyard; the latter engraved in Ducarel's "History of Lambeth."

3, 4. Armorial decorations above the attic storey, the one set of arms supported by the Genius of England and Fame, the other by Tritons and other sea emblems.

National Portrait Gallery.—1. Bust of Gray (?).

2. Bust of Lord Wellesley.

Victoria and Albert Museum.—Small relief of a pastoral subject in white marble against coloured marble background. Very curious, as being virtually a group of figures in china transferred to marble; probably an early work, and quite unlike his usual style.

Bethnal Green Museum.—Bust of an old man, terracotta model (cracking).

Royal Academy.—Bust of Sickness (1778), replica of the head at Guy's Hospital, his Diploma work.

Society of Arts.—Mars and Venus and Narcissus, models in plaster, the first executed in marble for Lord Yarborough. All three are well engraved.

Society of Antiquaries.—1. Admirable bust of George III., executed in return for the King's offering the Society quarters in Somerset House. A replica of that at Christ Church; others done for the University of Göttingen and the Queen's House at Kew.

2. Bust of Dr. Jeremiah Milles, F.S.A., a fresh and charming work.

St. Edmund's, Lombard Street.—Monument to the same Dr. Milles.

St. Giles's, Cripplegate.—1. Mural monument to Samuel Whitbread.

2. Bust of Milton (1793), a commission from Whitbread.

St. James's, Piccadilly.—Monument to Bishop Stillingfleet.

St. Andrew's by the Wardrobe.—Monument to the Rev. John Romaine.

Guildhall.—Allegorical monument to Lord Chatham, showing him in a toga, holding a pole with a cap of Liberty, with figures of Britannia, Commerce and the City of London below. This huge pyramidal composition, excellently engraved by Bartolozzi, was so much admired that the sculptor received "an extra gratuity." The carving is most beautiful, but Bacon's unfortunate fancy for allegorical detail, especially the Hive of Industry, spoils it as a whole.



STATUE OF THOMAS GUY, GUY'S HOSPITAL, BY JOHN BACON, R.A., FROM AN ENGRAVING BY BARTOLOZZI.

Old East India House.—Pedimental figures, excellently engraved by Bartolozzi, with the King, Religion, Justice, Industry, and other allegorical figures.

Guy's Hospital.—1. Two decorative figures on the front.

2. Monument to Guy, taking the hand of a sick man; in the background a view of the hospital. Reproduced here from Bartolozzi's engraving. This beautiful work led to the commission for the group in the Guildhall. The bust called "Sickness" in the Royal Academy is a study for the head of the sick man.

St. James's Square.—Equestrian statue of William III., finished by the younger Bacon, but in Bacon's studio at the time of his death. Erected from a bequest of 1734, lost sight of for many years, and on its rediscovery applied to the original purpose.

In the provinces and abroad are the following works, all monuments unless otherwise stated; many of them are only known to the writer at second-hand. J. T. Smith's list is inadequate, and mixes up works by father and son.

Antigua.—Lord Lavington, governor of the Leeward Islands.

Ashby St. Ledgers.—Mrs. Ashby.

Astley, Worcestershire.—Mrs. Mason, wife of the poet. Highly praised.

Bath Abbey.—Lady Millar of Batheaston, with two female figures suspending a medallion below the famous poetical Urn.

Burnham, Bucks.—Mr. Justice Willes.

Bombay.—Monument to "Capt. Lieut. George Warden," with Religion and Hope mourning over his deathbed, and above a relief of the soul soaring into rays of light. Known to the writer from a drawing in the British Museum. The monument to Lord Wellesley there, a magnificent work, is by the younger Bacon, like that to Lord Cornwallis at Calcutta.

Bristol.—1. Mrs. Draper (Sterne's Eliza), one of the show pieces of the Cathedral, showing Genius and Benevolence weeping over her urn.

2. Mrs. Katherine Vernon.

Buckland, Devonshire.—Lord Heathfield, defender of Gibraltar.

Cambridge.—Library of Trinity College: Bust of Anthony Shepherd.

Cardington.—Samuel Whitbread.

Eton.—Statue of Henry VI., in the Ante-chapel; the bust from which the larger work was done is now lost. The curious story of the anonymous donor is told by Cunningham.

Glossop.—One of the Hague family.

Godstone.—Sarah Smith.

Hawkhurst.—Nathaniel Lardner.

St. Heliers, Jersey.—Major Pierson, killed in the French invasion of Jersey in 1783.

Kingston, Jamaica.—1. Statue of Lord Rodney.

2. Monument to Dr. Anderson.

3. Lady Williamson, voted by the Assembly of Jamaica.

Leicester.—Mr. John Johnson, after the designs of J. Johnson.

Lymington.—Captain Rogers.

Macclesfield.—Mr. Roe, St. Michael's Church.

Newcastle.—Matthew White Ridley (*ob.* 1778), in St. Nicholas, a fine work.

Oxford.—1. Codrington Library, All Souls': Statue of Sir William Blackstone, of which Dallaway justly says that it is "full of spirit and dignity. It commands attention and expresses importance."

2. Bodleian Gallery. Bust of Lord North.

3-6. Christ Church. Busts of George III., General Guise, Archbishop Robinson. Bishop Barrington.

7. Pembroke. Bust of Dr. Johnson. The bust of Purcell, formerly in the Music School, is lost.

Penn.—Mr. Curzon.

Rosethorne. Mrs. Egerton.

Salisbury.—Monument to "Hermes" Harris, with the Muse of Moral Philosophy seated, holding a medallion portrait. An early and very lovely work.

Stamford, Lincs.—Sir John and Lady Cust, St. John's Church.

Stoneleigh Abbey, Warwick.—Mr. Justice Willes.

Tracton Abbey, Co. Cork.—Baron Tracton.

West Horsley.—The Rev. Warton Fullerton.

Widworthy, Devon.—James Marwood, with figures of Justice and Charity on either side of a flower-wreathed urn.

Worcester.—Mrs. Withers, said by Cecil to be his first work of the kind.

Wrenbury.—1. Mrs. Starkey.

2. Mrs. Cotton.

In the gardens at Burton Pynsent, Somerset, was an urn by Bacon "sacred to the memory of the Earl of Chatham," and he also executed a medallion of London presenting Admiral Keppel with the freedom of the city, known to the writer from an engraving of the title page of a pamphlet on the subject. A splendid monument to Captain James Montague is known from three drawings in the British Museum, where will also be found a drawing of the Guildhall Chatham. Mr. Beresford Chancellor mentions a monument to Judge Morton, and one to Lord Normanton; as the latter died in 1809, this must be by the younger Bacon.

No list of his works can omit the decorative figures executed for the Coade factory, of which a book of designs is known, the "Time defying the Efforts of Fire," for instance, the lost figures on Carlton House, the group after Lady Di Beauclerk's designs on the Pelican office, Lombard Street, or the tombstones and decorative figures scattered up and down the country. Some of these may be identified from the book of designs issued by the firm already alluded to. He also executed a fine chimneypiece in Goodwood House, and a very much more important work, the fine statue of the republican historian Mrs. Catharine Macaulay, which is mentioned in the "Dictionary of National Biography"; his bust of Sir Joshua Reynolds, once in the hall of the British Institution, has not been traced by the writer.

A word of caution may be added. Even a contemporary like J. T. Smith mixes up the work of John Bacon with that of his son, and many monuments ascribed to the father—

e.g., that of Captain Duff in St. Paul's Cathedral—are by Bacon junior.

Bacon is the youngest of our great sculptors to work in the traditional manner of the French Renaissance, and he is one of the very greatest. The author of the Muse on the monument of "Hermes" Harris, of the Britannia on that of Pocock, of the Blackstone at Oxford, of the busts at Oxford and the Society of Antiquaries, has nothing to fear from comparison with any of his predecessors or successors, and only Roubiliac can be definitely placed above him. Untouched by the influence of neo-Hellenism—for he never studied abroad, and thereby, as George III. said, did us the greater honour—he was incapable of the bathos into which direct imitation of the antique was to lead Banks in his own generation and Rossi, Theed, and Westmacott in the next. But an over-insistence on allegory is an undoubted blemish in his larger works, and now and again, as in the too-conspicuous instances of Johnson, Howard, and the Guildhall Chatham, his use of classical dress is most unfortunate. The sculptor of Sir William Blackstone and the Abbey Chatham might have realised how much his statues of contemporaries had to gain by the use of contemporary costume, and Dr. Johnson in particular, who objected on principle to sitters being portrayed in *deshabille* or without a wig, is the great example of the eighteenth-century man of letters who should have been shown as he was in life, and not, as Mr. John Bailey has it, as "a retired gladiator." But before the Pocock monument, the Abbey Chatham, and Sir William Blackstone criticism is silent, and we can only feel with Cowper in the "Task" that

"Bacon there
Gives more than female beauty to a stone,
And Chatham's eloquence to marble lips."

His preposterous epitaphs and "pious breathings" are no concern of art, and however unengaging his personality may be, his work, the most widely spread of any English sculptor's, can never be disregarded. Flaxman's dislike of him, and his own Clapham School utterances, have tended to obscure his greatness, but his best work can never become obsolete, and his artistic importance as the last great English sculptor to withstand the tide of neo-Hellenism has never been adequately recognised. The exquisite finish of Roubiliac's surfaces, his masterly draperies and unique sense of character, are altogether out of Bacon's reach, but there can be no doubt that Bacon in his generation is as much the first of English sculptors as Roubiliac in his, and we can be justly proud that this may be said, as it was said of Pierce in an earlier chapter, of an artist who was for once, in Defoe's phrase, a true-born Englishman.

Competition News.

In a report issued this week the Estate and Property Committee of the Newcastle Corporation recommends the City Council to approve of obtaining competitive designs from architects practising in the United Kingdom for a general scheme of baths, and a public hall on the site of the Northumberland Baths at an approximate cost of £200,000. It is also suggested that the premium for the first premium design should be £750, for the second £250, and for the third £100. The scheme of the City Property Surveyor provides for two swimming ponds in the western half, and galleries and gangway for accommodating 1,065 persons at a swimming gala. It is proposed to cover one of the baths with a wooden floor in the winter, which would provide seating accommodation for 1,100 persons. Provision is also made for an orchestra and an organ, artists' rooms, cloak-rooms, lavatories, etc., in the concert hall, on the eastern half of the site. Seating accommodation is provided for a total of 2,518 persons and the orchestra for 400.

Gourock Dean of Guild have passed plans for the municipal buildings to be erected in Shore Street.

It is reported that a large bulge has been discovered in the wall of the north-east chancel aisle of Peterborough Cathedral, and part of the building has been pronounced dangerous. The immediate buttressing of it at a cost of £1,500 became imperative. £9,000 has already been spent on restoration work, which has been going on for two years, and the available funds are nearly exhausted.

On the Road in Holland.—I.

By Charles G. Harper.

To visit Holland is, for the stranger to that country, to be interested and amused all day and every day. Everything is strange and beside one's usual experiences. The scenery is nothing, for almost the entire country is formed by the sand and mud brought down during uncounted ages from the Continent of Europe by the Rhine and other rivers, and it is therefore level; and not merely level, but well below the level of the sea and the rivers, and it is saved from inundation only by a long series of elaborate dykes maintained by a special Government Department, the "Waterstaat." There is not a stone in the country except those imported for the few "macadam" roads, the buildings that exceptionally are in stone instead of the usual brick, and the continuous apron of black basalt stones from Norway with which mile after mile of the sea-defences are revetted.

But if Holland's scenery be tame, its buildings, public

minutes instead of in kilometres. The going is a pedestrian's pace—five and a half kilometres to one hour.

But the fat lady is not fishing: she is collecting toll from a passing craft, and the most convenient way to do it is found to be by letting down a wooden shoe on a line. Again, as you pass by the level fields and the farmhouses, you cannot fail to observe both the notices, "Wacht u voor den Hond," and the very practical kind of wooden clothes-horse used in Holland for drying linen—a contrivance which gives more surface to the air and should obviously be in use everywhere. But we seem to know nothing of it in England.

So shall we come, by some route or another, to the shores of the Zuider Zee and to Monnickendam. You cannot help yourself. The name of the Zuider Zee magnetises you, and the fame of Volendam's queerly clad villagers is a lure that cannot be withstood.



A DUTCH COUNTRY SCENE: ROAD AND CANAL.

and private, are extremely often romantically beautiful; and even in the modern small houses and workmen's dwellings there is exhibited a good deal of that ingenuity and resource in the use of brick which might fairly have been expected in a people so thoroughly used to that material. Brick, indeed, paves most of Holland's roads—brick red, yellow, blue, grey, set up on end. Given a good foundation, there is no better road either to look at or to travel on. It is dustless, easily cleaned, and as easily repaired. These roads are often bordered by canals (the Dutch term canals "grachten"), and generally run between an avenue of trees, with what we ought to have in England—a special path on one side or the other for cyclists ("Rijwielpad"). Very often, where a canal runs parallel with the road, there will be noticed a board with the one word "Strijk" on it in prominent letters. This, pronounced "strake," is an injunction to skippers on canal boats to strike their sails, for fear of alarming horses. Other curious features will be observed: a fat Dutchwoman (Dutchwomen are mostly fat, and are fond of wearing a dozen skirts at once) apparently angling, with the result of catching a wooden boot; and signposts with the distances to places mentioned on their arms indicated in hours and

From Amsterdam the foreigner in Holland is supposed by Dutch satirists to at once make his way to Volendam. This reflection is very pleasing to the average Dutchman, who believes neither in Volendam, Monnickendam, Edam, or the island of Marken. I will not hide it from you; by the "foreigner" the saturnine Dutchman really means the Englishman, who is attracted by the quaint old-world costumes of the fishermen and their families in those villages beside, or in, the Zuider Zee. Dutch people you will perceive there, but in the season chiefly artists, who have convinced themselves that the fishermen continue to dress themselves in their preposterous trousers, queer jackets, and fur caps because they like it, not because other people do. At any rate, they are better worth looking at than are the diamond-merchant Jews of Amsterdam, who wear a good deal of their stock-in-trade on their persons, but do not appear to make a fetish of washing themselves.

Monnickendam (the "monks" dam) is quiet: the quietness of decay. But it is beautiful in that decline, with the noble tower of its Stadhuis, built in 1591, the chief feature at the back of the Waag (the weigh-house on the quay). The weigh-house is a feature of all old Dutch towns; and an equally prevalent feature is the fashion

of external shutters to the half of a window and painting on the shutters in two colours—usually the heraldic colours of the town.

Edam is full of charm, and with a good deal of architectural interest. Also it is full of cheeses, for it is, together with Alkmaar, a great place for those familiar round cheeses, coloured outside crimson lake, which are in England the best known of cheeses from Holland. Volendam is altogether a different place. All its houses are small ones, faced with weather-boarding, and they humbly cower down on either side of the big dyke on whose summit runs the only road in the village: one of the brick-paved roads. Here, in this metropolis of Dutch fishing, you may see the queerest figures; too well used to artists to be embarrassed when sketched or photographed. They are even more



VOLENDAM.

astonishing on Marken Island, where both boys and girls wear skirts of an identical type, until the boy comes to seven years, when he is breeched.

No one will feel inclined to criticise the Englishman who from Volendam proceeds to visit Hoorn, that charming town of some 11,000 inhabitants (but it looks larger) also seated on the Zuider Zee. When in 1616 William Schouten, a native of this town and port, discovered a passage round the most southerly point of South America he named it, after his native town, "Cape Hoorn"; but in the modern spelling few ever suspect that origin of the name. Looking at the map, it is generally thought that it is descriptive of the horn-like projection of the cape itself. But, curiously enough, Hoorn seems to have derived its own name from the horn-shaped curve of its harbour-mole.

From the sea, under any aspect of light, Hoorn looks as romantic as any city of dream: its towers and spires rising so delicately and gracefully. There in the foreground is the Water-Gate, its high-pitched roof and slender spire less rollicking and rumbustious than the usual fantastic imaginations of the old Dutch architects. Nor at close quarters does Hoorn disappoint you. Its streets are full of queer gables with delicately rendered details, and with old shops still carrying on the same kind of business they were engaged in three hundred years ago. You may see that it is so by the odd little carved stone tablets over those shops—over, for instance, the little cheese-shop pictured here. By that sculptured work you perceive that even in the seventeenth century they were interested in cheeses. The old weigh-house in the Market Square is also a fine feature.

But the most eminently desirable and delightful of these old towns is Enkhuizen. Crossing the thirteen miles of the Zuider Zee from Stavoren, almost the least interesting place in Holland, the steamer brings you quietly into Enkhuizen harbour, as into some little city of old romance, so quaint and lovely is it. There rise the great Drommedaris Tower and water-gate against the sky, with the beautiful tower of St. Pancras, the Zuiderkerke, in the background. You are almost sure to hear the sweet carillons of them across the water, for they play not merely

every hour, but shorter snatches at the quarters. Those of the Drommedaris Tower are the most beautiful in Holland—or almost, let us say, in case some reader has an affection for others. I know not what old Dutch airs they play in their thin, tinkling chimes, not unlike the performances of musical-boxes; but they bring romance and sentiment and a centuries-old beauty into this striving era.

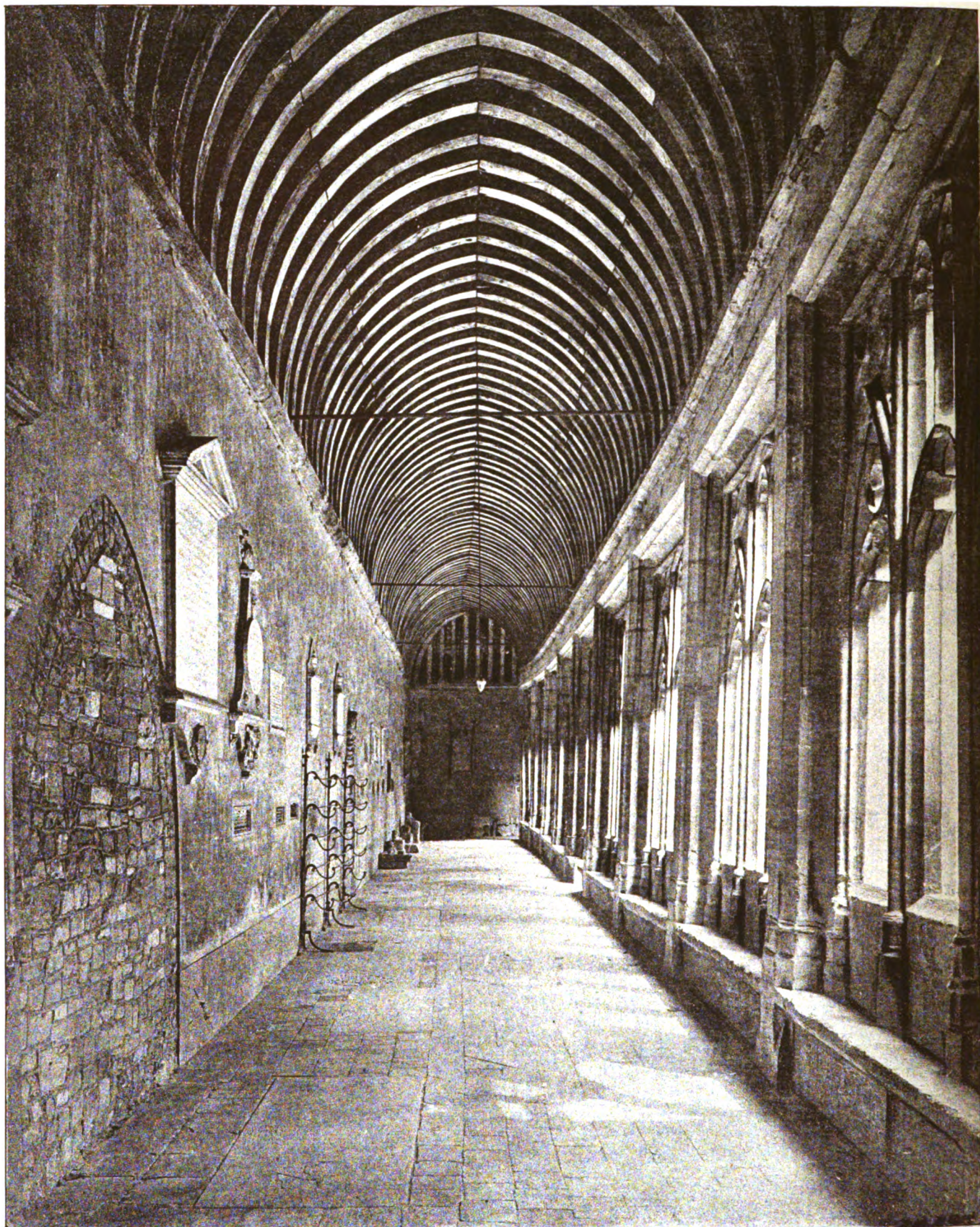
The guide-books will tell you that Enkhuizen is utterly decayed, that grass grows in its streets, and that now not a single fishing smack enters its harbour. That is very odd; for no grass grows in those well-kept streets, and surely I was not mistaken in fancying I saw many fishing smacks and other vessels in that harbour. Also there is a fine and a busy railway harbour-station at Enkhuizen; and at my hotel there were commercial travellers. Such as they do not pay visits to dead towns. But once upon a time Enkhuizen was much larger. The Enkhuizeners have, however, put that historic fact away back in the lumber-room of their minds. They realise that they are living not in a town of 40,000 inhabitants, as once this was, but in one of 8,000. But at the same time they know that the figure of 8,000 is creeping up towards 9,000. In short, the place is prosperous in its quiet way; and there are even new banks and a fine recent "post-kantoor," which is to say a post-office. "Kantoor" is the Nederlandsch variant of the French word "comptoir"; and the Dutch prefer to use it always for "office," instead of "bureau."

Of the three remaining gates of this once-fortified town, the Koepoort, the Stavoren Poort, and that by the haven, over which the great Drommedaris Tower so picturesquely presides, this last-named is chief. It was built in 1540; grouping as it does with the shipping, the queer old pantile-roofed houses, and the drawbridge, it forms the chief picture in the town. Over its gateways, enriched with sculptures of martial emblems, are the arms of Enkhuizen: three golden herrings on a blue field. Conspicuously on the outer wall hang two anchors. They are relics of a naval battle fought between here and Hoorn in 1573, when Admiral Bossu, the Spanish Stadtholder, was defeated and taken prisoner by the revolted Dutchmen. They kept him in prison three years. They have his drinking-cup at Hoorn, his sword at Enkhuizen, and his collar at Monnickendam.

At Veere, down south, in the island of Walcheren, is a decayed seaport of equal interest. It was the ancient rival of Middelburg, but now is a mere ghost of its former self.



THE LITTLE CHEESE SHOP, HOORN.



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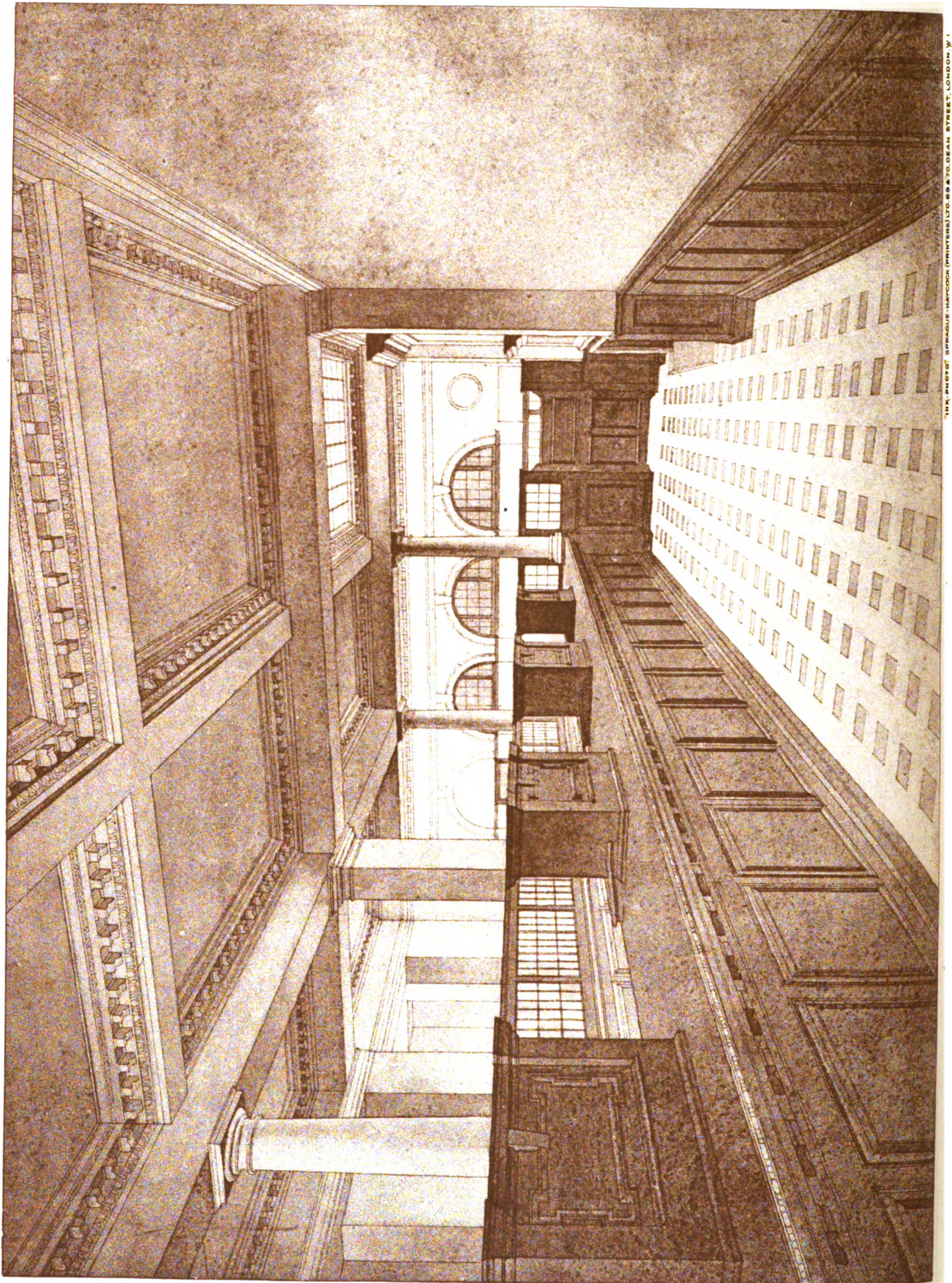
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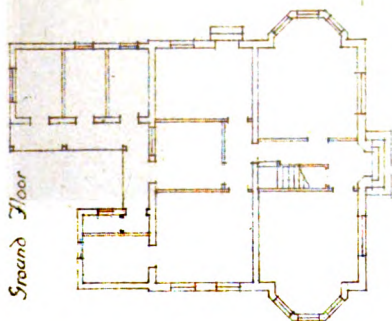
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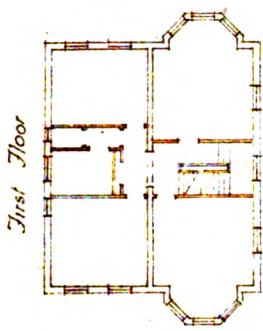
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LLOYDS BANK, EASTBOURNE.

A HOUSE AT WORCESTER-PARK

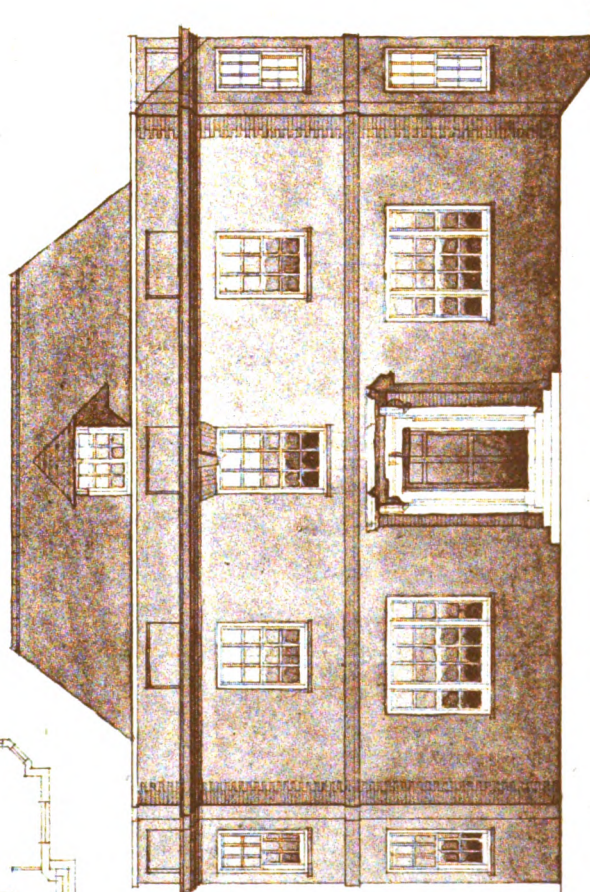


Ground Floor

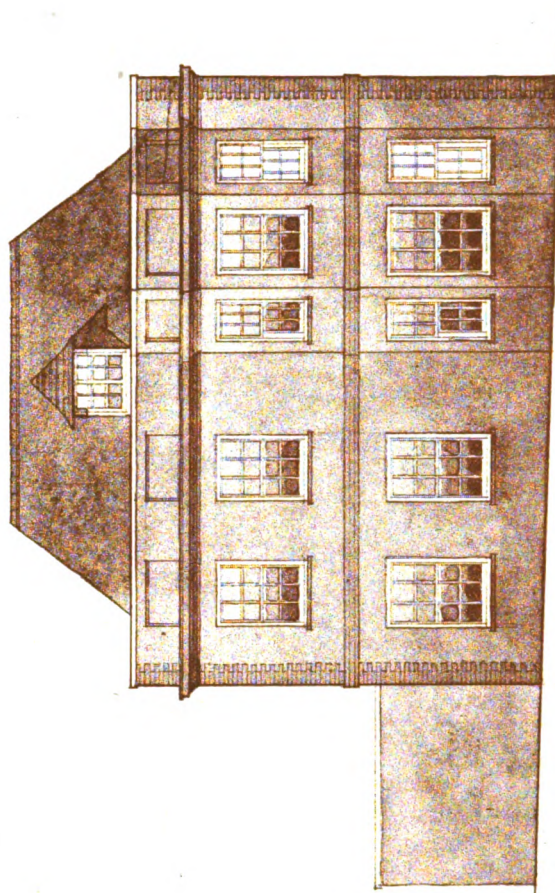


First Floor

Note — Gas fires only to be used



South Elevation



West Elevation

Scale — Eight Feet to the Inch

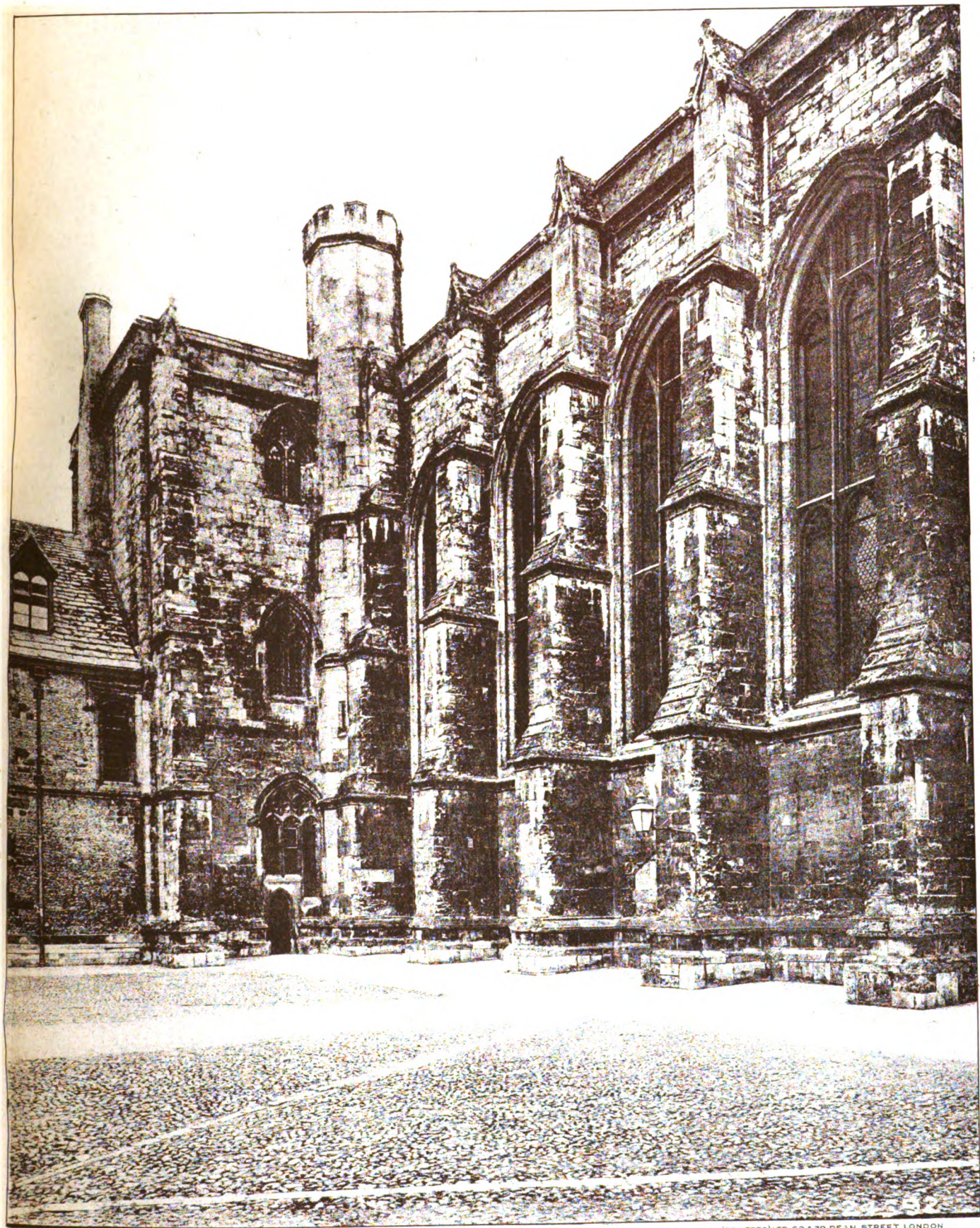
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A HOUSE AT WORCESTER PARK.
HORACE FIELD, ARCHITECT.

EMBER 8th, 1922.



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EXTERIOR VIEW OF CHAPEL.

.EGE.

HERE & Co.

EMBER 8th, 1922.



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INTERIOR OF CHANTRY CHAPEL.



ENKHUIZEN: THE WATER-POORT AND DROMMEDARIS TOWER.

"Veere" means "ferry," and the name of it is pronounced very like that of the English word. Both Middelburg and Veere keenly sought to attract traders from overseas in times when such foreign merchants were burdened with all manner of restrictions. Scottish business men were established in Middelburg in the sixteenth century. Their "staple" was situated in that town, and they were forbidden to trade elsewhere. If their vessels were found in other ports, both ships and goods might be confiscated when caught. In spite of this penalty, they did trade to other places; and Veere encouraged them by offering substantial inducements. Chief among these was the undertaking that, if attacked and plundered by pirates, Veere would, at her own costs and charges, seize the pirates and recover the goods. The choir of that vast and stately church which now we see in neglect was placed at the disposal of those Scottish merchants and might be used as their burial-place; and they could have their own resident chaplain, who would be provided by the town with free

wine and beer. In 1612 Veere found them a new church, with manse and churchyard, and an inn, to be used exclusively by the Scots: the liquors sold at the inn to be free of excise dues. And so Veere prospered, until, in 1725, when all Netherland dues were reduced, the town could no longer offer exceptional inducements. By 1795 the Scottish community here had been reduced to almost nothing, and to-day the only vestiges of its former existence are the old inn, now called the "Campveersche Toren," by the harbour, and the "Scots House," where the staple was situated. It dates from the end of the sixteenth century, and is, exceptionally, built of stone. The square window-heads, surmounted by elaborate floriated canopies, have to English observers the look of later insertions, replacing pointed windows; but that is not the case. This combination, curious to us, was a Dutch architectural convention, frequently to be seen.

The market-place of Middelburg is just outside the circular road enclosing the centre of the town. Here is



HOORN WATER-POORT.



MARKET PLACE, HOORN.

the great and lovely Town Hall, built in the early years of the sixteenth century, with rich and lofty tower and elaborate frontage of late Gothic windows with fretted tabernacles between them, filled with statues of the ancient Counts and Countesses of Zeeland and Holland; above them the steep-pitched roof, with three tiers of dormer-windows. Added to that array of twenty-five historical personages, you find the present Queen of Holland with the Princess Juliana in her arms. The statue was placed there in 1910. The Princess, and future Queen Regnant of Holland, is named after her famous ancestress, the Countess Juliana, mother of William the Silent, maker of the independence of Holland in the sixteenth century. The Countess Jacqueline, too, looks down from her niche among the law-givers and rulers, whose law-giving and rule was that basis of all domination, the sword. Figuratively, but not less actually for that, it remains the one stand-by at this day, in the last resort; although it is artillery and not the sword-blade that is the arbiter.

To cross the Zuider Zee from Enkhuizen to Stavoren and thence to Friesland is to pass into a region very different from South Holland. It is the country of the

Friesland meres, where the canals and rivers broaden out into vast lakes, always shallow but yet sea-like. They are sailed by strange varieties of craft—tjalks and praams, and others with the oddest of technical names, consorting nowadays with motor-barges built of iron but still keeping a good deal of the old lines, and painted with the like gaudy colours, and named often after the old Dutch naval heroes. Often you will see the name of Piet Hein, that old Admiral of whose wonderful exploits mothers still sing to their children. Grouw stands on such a Friesland mere, with its great brick tower finished off with saddle-back roof, forming a noble picture from the water, the tjalks and schuits and other quaint rigs clustered about it.

Centuries ago, when Holland was in the forefront of art, science, colonisation, and trade—those times when the Dutch were in advance of ourselves in most of these things—almost every province of the Netherlands was possessed of numerous thriving towns, rich in enterprise, commerce, society, and all the amenities of life. We may almost declare each of these towns to have been a self-sufficing unit, an independent community, owning but little allegiance to the country in general. This was an order of things induced largely by the natural difficulties of communication, but even more by the peculiarly inde-



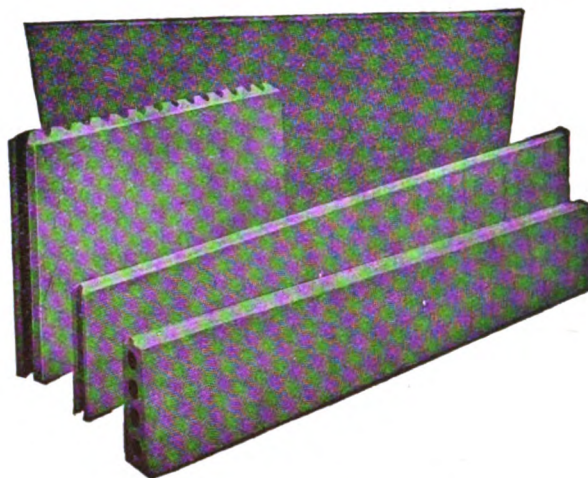
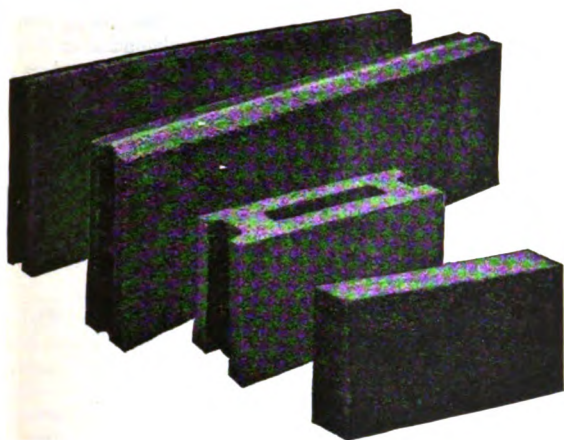
THE 'SCOTS' HOUSE, VEERE.



THE TOWN HALL, MIDDELBURG.

pendent character of the Dutch people. Hardly shall we find elsewhere than in Holland that keen individuality which made of each town a little State. Early they had acquired that intense civic consciousness which has come so late, and by no means so markedly, in England. The great populous modern English town remains in many cases just a huge overgrown and formless village, which has its Town Hall, its Corn Exchange, and other public buildings, it is true, but rarely possesses any civic centre. Scarce any one has that usual feature of even the smaller Continental towns—the Grand Place, where you may stand and realise the town. No, study the plans of English towns, and you will find the streets going in every direction, apparently without purpose. Only in modern times, and at great cost, and not often with conspicuous success, have improvements been made which have given some sort of dignity to those streets; and, even so, when some kind of centre has been achieved, in the face of vast expense and much opposition, it is neither adequate nor of any shape known to geometry. The city of Birmingham is, perhaps, the prime instance.

(To be continued.)

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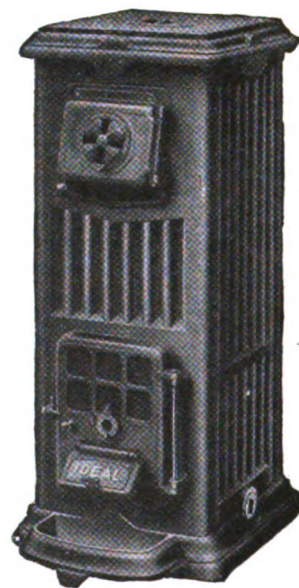
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Workmen's Compensation Act Amendment.

The Home Secretary has agreed to the Special Committee of the General Council of the Trades Congress and the Executive of the Labour Party publishing the revised proposals of the Home Office for the amendment of the Workmen's Compensation Act.

The Home Office communication is as follows:—

Home Office, Whitehall,

August 21.

SIR,—I am directed by the Secretary of State to refer to the conference with employers' and workers' representatives on the subject of workmen's compensation, which took place at the Home Office on the 5th ult. After carefully considering the views expressed on both sides, Mr. Shortt has come to the conclusion that in the present financial and industrial situation it is not possible to reach a settlement of a permanent character, but he considers that the proposals which were put forward by the Home Office in the Draft Bill as a basis for discussion would, with one or two modifications, be reasonable and fair to both sides under present conditions, and might well be accepted as a temporary settlement, say, for a period of five years. He has, accordingly, had the Bill revised, and enclosed herewith for the consideration of the workers' representatives.

It will be seen that the Bill has been divided into three parts—part one dealing with the alterations in the benefit provisions of the principal Act and being limited to a duration of five years. Attention is called to the new provision in Clause 2, which was designed to meet the case of the low paid workers who will not benefit under the provision in Clause 2 (1), and who will, the Secretary of State hopes, obviate the objections felt to a provision for a minimum limit of compensation. Attention is also called to the new provision in part two giving effect to the useful and non-controversial recommendations of the Holman-Gregory report. It has been decided not to include the safety provisions which were circulated by the Home Office in the present Bill, as the demands on the Government time will not make it possible to pass any workman's compensation measure of a controversial character in the autumn session. The Bill can only be proceeded with if it is accepted by both sides, and on receiving assurances to that effect from both sides he will ask the Government to find time to pass the Bill this year.

The Home Office intimate the fuller amendments to those contained in the Draft Bill previously published.

MAIN ALTERATIONS.

Mr. R. R. Bannatyne writes to Mr. Percy Cole: The main alterations which we would propose to make in the Draft Bill are:—

(1) To add to Clause 2 a new sub-clause to the following effect:—

Where the weekly payment due under the principal Act to a workman who is totally incapacitated is less than £1, the workman shall be entitled during such incapacity to a weekly addition equal to one-half of the weekly payment, provided that the total weekly compensation shall not exceed £1. Such addition shall for all the purposes of the principal Act be treated as if it were part of the weekly payment during the continuation of the foregoing enactment. The provisions contained in proviso B of the first schedule to the principal Act in regard to the amount of weekly payment in the case of a workman who is under 21 years of age at the date of the injury shall cease to apply.

(2) To limit the duration of clauses one, two, three and five of the Bill to a period of five years from the commencement of the Act.

We also contemplate the following additions and modifications, based on the unanimous recommendations of the Departmental Committee:—

(1) An amendment of Section 5 (3) of the Act of 1906, so as to give priority in the case of bankruptcy of the employer to the full amount of compensation due. (See paragraph 100 of the report of the Committee.)

(2) Such amendment of, or addition to, Section 8 of the Act of 1906 as will enable employers and workmen to dispense with the certificate of the certifying surgeon in the case of a scheduled disease, and to make a binding agreement for payment of compensation.

(3) The inclusion in the first schedule of the Act of 1906 of a provision defining dependency in the sense recommended by the Departmental Committee in paragraph 62 of their report.

(4) An amendment of Section 3 of the Act of 1906 providing that the Chief Registrar of Friendly Societies shall not hereafter certify a scheme or renew a certificate of any existing scheme unless he is satisfied that adequate provision is made to secure

the payment of the benefits under the scheme, both during the currency of the scheme and after the certificate is revoked or expires.

(5) The alteration of 12 months in paragraph 16 of the first schedule of the Act of 1906 to 6 months for the protection and benefit of minors. (See paragraphs 70 and 81 of the Committee's report.)

We further contemplate, in order to meet a complaint made to us on several occasions by deputations from the Trades Union Congress, and amendment of Section 11 of the Act of 1906 to provide more effective machinery for the detention of foreign ships, and to apply the provisions of the section to cases where the ship has been demised to charterers. Some amendment is required by the Treasury in order to transfer from the State to the parties the payment of the charges of medical referees in respect of examinations made under Schedules 1, 15 and 18 of the Act of 1906. The referee's charges would, however, continue to be fixed as at present by regulation.

Water Power of Finland.

To the "Monthly Bulletin," issued by the Bank of Finland, Mr. Hugo Malmi, engineer-in-chief of the State Water Power Office, contributes an article on the water power of Finland, in the course of which he points out that the State owns about a third of the water power in the country. "With the increase of the country's demand for electricity, the State [he writes] has taken steps with a view to utilise some of the largest rapids in its possession. Nearest to hand of these is the stream Vuoksi, over one-third of the waters of which are in the direct possession of the State, and one-fifth indirectly through certain companies of whose shares the State owns the majority. Plans for the utilisation of the water powers of Vuoksi have been drawn up by the State in such a manner that the whole of the natural energy represented by this stream would be, by degrees, drawn into the service of the country. First to develop will be the rapids at Imatra, from which at natural medium water about 150,000 horse-power could be obtained, the first installation of machinery being about 70,000 horse-power. For the commencement of this work the Diet has placed a sum of 20 million marks at disposal, and the work on the power station has already begun. Through private initiative also the development of the water powers of the larger rivers has recently been commenced. The power from these rapids will be used for industrial purposes, the satisfying of the demand for electricity of the municipalities, and for the needs of the smaller and home industries. The programme for the future comprises also the electrification of certain railway lines of the country. As especially the energy from Imatra will be comparatively cheap, it is to be expected that the electro-chemical industry, which has already obtained a foothold in the country, will further develop, and enlist still more considerable portions of the power obtained from the rapids in its service."

The West Hartlepool War Memorial Committee, at their meeting on the 4th inst., accepted the tender of Messrs. John Fyfe, Ltd., Aberdeen, for the monument to be erected in Victoria Square, which, with a number of cottage homes, are to be the main features of the scheme. The amount of the tender is £10,932, and the work is to be executed in Aberdeen grey granite. The names of 1,500 men will be placed upon bronze panels.

The Caerphilly Housing Committee at their meeting on the 4th inst. considered tenders for the erection of 52 type "C" (non-parlour) houses at Caerphilly and 20 of the "C" type at Nelson, and it was resolved to accept the tenders of Mr. A. J. Rossiter, Caerphilly, and Messrs. Blackburn & Co., respectively, for submission to the Ministry.

Writing in "The Compendium" on waste of coal and its national use, Professor Henry E. Armstrong says:—"The solution of the problem of producing smokeless, cleanly fuels, suitable for general use, has passed into the final experimental stage, and is ripe for practical application. It is not only open to us to preserve our national inheritance, the open fire—which is beyond all question superior to any other form of heating in cheerfulness and healthfulness—but we may also get rid of visible smoke and greatly diminish the amount of noxious fumes projected into the atmosphere in burning raw coal; and we may secure considerable economy both in cost and labour. The smokeless fuel for industrial use will be best produced at the pithead. A beginning should be made without delay. Its superior value as a dust fuel is probably considerable, and its use in this way will, I believe, rapidly extend when once given a fair trial. The advantage to be gained by stabilising coal by carbonisation cannot well be over-rated; the special value of a standardised fuel, yielding a minimum of ashes must be apparent to all."



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General.

Mr. James Totty, architect, Rotherham, has prepared plans for rebuilding Stocksbridge Congregational Church.

Almshouses are to be erected at Hucknall, the cost being about £10,000, by Mr. J. Cahn, of Papplewick Grange, near Hucknall.

Birkenhead Corporation has received tenders for the erection of 54 houses, at a cost of £423 per house, on the Hoylake Road and Sumner Street estates.

A committee appointed by the Sussex Archaeological Society are appealing for additional volunteers to assist in the task of making a complete survey of the county's earthworks—barrows, camps, habitation sites, roads, dykes, moats, etc.

The following amended tenders were afterwards submitted:—Messrs. Tinker & Young, £31,058; Wm. Townson & Sons, Ltd., £30,325; and James Byrom, Ltd., £28,393. The amended tender of James Byrom, Ltd., was finally accepted.

A special committee of the Birkenhead Corporation is considering a proposal to erect an art gallery, the cost of which will be defrayed out of the bequests to the town under the wills of the late Mr. John Williamson and Mr. P. A. Williamson.

Work is expected to start in a few weeks' time on the erection of the new capital power station, which the County of London Electric Supply Company are to build at Barking. The scheme provides for an ultimate output of about 130,000 h.p. The station will be built in three sections, of which only one is to be commenced at present. Additional capital for the undertaking amounting to £1,000,000 was recently issued by the Company.

The Holland County Council have decided to renovate the old Tudor ruins of Orme Hall, at Kirton, near Boston. The buildings now standing are supposed to be the gateway to the Hall, and are mentioned in Marrat's "History of Lincolnshire" as formerly belonging to Sir John Locton, Knight. The Spalding Gentlemen's Society offered to demolish the ruins and preserve the windows—which in some cases are resting on ivy branches only—in their museum.

The Housing Sub-Committee of the Blackburn Corporation recently submitted plans for twenty houses proposed in connection with the housing scheme. The Ministry of Health declare that the lowest tender is too high to be approved, and recommend that further plans should be submitted of the type approved by the Ministry. The Blackburn Sub-Committee decline to build houses of an inferior type to those now erected, and in consequence houses will not be built.

A complaint against the State-aided houses built at Annitsford, Northumberland, has been made by the medical officer of health for the district. In his report to the Council, the medical officer alleged that the Annitsford houses, recently erected, were the worst he had seen in Northumberland and Durham. Foodstuffs had to be kept under the table and coals under the bed. There were neither pantries or outhouses. Application is to be made to the Ministry of Health to erect other houses on a different scale.

It was intimated at a meeting of the Housing Committee of the Aberdeen Town Council that the Board of Health had refused to approve of the tenders submitted for the sixth development of the Aberdeen housing scheme at Torry on account of their being too high. The Board stated that the figure would have to be reduced to £575 per house. The tenders submitted to the Board were £750 per house. It was stated at the meeting that similar houses were being built at Peterhead for £550 each. The committee decided to get offers from Peterhead and Edinburgh.

The International Labour Office has been informed that the Government has taken preliminary steps towards the application of the Draft Convention on the use of white lead in painting, which was adopted by the International Labour Conference last year. The main purposes of the Convention are to prohibit, after November 19, 1927, the use of white lead in the internal painting of buildings, except under agreed conditions, railway stations, and industrial establishments, and, where white lead is not prohibited, to make its use subject to definite precautionary hygienic regulations as from January 1, 1924, and to make cases of lead poisoning compulsorily notifiable.

The Housing Department of Glasgow Corporation have submitted a tender of £29,162 for the erection of 102 tenement houses in Logan Street, Polmadie, and this, being the lowest tender, has been recommended for acceptance by the Housing Committee. The lowest offer by an individual contractor was £30,108. On the recommended offer the cost will work out at £285 for two-apartment houses and £305 for houses of three apartments. It may be stated that the Department utilised direct labour for carrying out the Drumoyne (Govan) housing scheme. Compared with the tenders received a month ago for the Hamiltonhill scheme, there has been a drop of from £5 to £6 in the cost of each house.

At last week's meeting of the Scunthorpe and Frodingham Urban Council, the clerk reported that he had asked Messrs. Brocklesby and Marchment, the Council's architects, to submit any claim which they considered they had in respect of abandoned work, and he had received from them an account amounting to £28,337, less £4,000 received on account. This amount was in respect of the whole of the fees claimed in respect of the Crosby and Brumby Hall schemes. As the Housing Commissioner had suggested that the Ministry of Health should be kept fully in touch with the position, it was resolved that a copy of this account be sent to the Ministry with a statement as to the position and a request for their views.

A plan providing for the improvement of the Cross of Glasgow and for the retention of the Tolbooth Steeple on its present site is recommended for adoption by Glasgow Corporation. The recommendation was made by a small sub-committee representing various Committees of the Corporation. It is proposed in the scheme to demolish the old buildings adjoining the Steeple on its west side, and to erect buildings, concave in shape, at sufficient distance from the Steeple to allow of tramway lines on the west as well as on the east side of the ancient edifice. Involved in the clearance would be the sole support—an arm of masonry—which the Steeple has depended upon since its erection almost three centuries ago. It will, therefore, require to be underpinned, and the sub-committee advise that before proceeding with the work of demolition at the corner of Trongate and High Street steps should be taken to have the Steeple shored-up and made secure.

An interesting scheme in connection with the training of youths in electrical engineering has been adopted by the Leeds Education Committee. The Instructional Workshops in Woodhouse Lane, where disabled ex-Service men have hitherto been trained, are now to be used for the training in electrical engineering of youths in their teens. Under the provisions of the Fisher Act the local Education Authority took over the machinery from the Ministry of Labour at a cost of £9,000, which is £20,000 less than its original cost. The general idea is to give the apprentices training in the daytime over a period of two years on the alternate week plan, the youths attending the training school one week, and be in their employers' workshops the following week, and so on. A similar scheme has been successfully carried out in Leeds in connection with mechanical engineering during the past twelve months. There are really two schemes—one for the boy who is to proceed direct to his trade, the other for the secondary schoolboy who desires to go on to the University.

The following tenders were received for the erection of a warehouse, garage and office in reinforced concrete at Trafford Park, Manchester, for Messrs. Richard Johnson Clapham & Morris, Ltd., Lever Street, Manchester. The architect is Mr. Arthur Clayton, M.S.A., Duchy Chambers, Clarence Street, Manchester, and 6, Chestergate, Macclesfield. James Byrom, Ltd., Bury, £31,531; Wm. Townson & Sons, Ltd., £33,990; Sir Wm. Arrol & Co., Ltd., £34,435 14s. 10d.; Tinker & Young Ltd., £34,446; W. Storrs & Sons & Co., Ltd., £34,599; Russell Building & Contracting Co., Ltd., £34,599; J. Hollinsworth & Sons, £34,740 10s.; Leonard Fairclough, Ltd., £34,771 9s. 9d.; S. Megarity & Co., £35,393; F. Butterworth, £35,414; Eatock & Co., £35,517 15s. 5d.; J. Gerrard & Sons, Ltd., £36,109; S. & J. Smethurst, Ltd., £36,163; Sir Robert McAlpine & Sons, £36,690; Robert Carlyle & Co., Ltd., £37,012; C. H. Normanton & Sons, Ltd., £37,419; Moston Brick & Building Co., Ltd., £37,500; Smith & Briggs, Ltd., £38,159; Somersville & Co., £39,650; Arthur Fenton, £41,914; James Cocker, Ltd., £41,950; and Fred Mitchell & Son, Ltd., £42,024 10s. 2d.

The Yorkshire Philosophical Society celebrates its centenary on September 20. At 2.30 p.m. the members and officers of the Society will assemble in the Tempest Anderson Hall to meet the delegates and guests, and the President, Mr. W. H. St. Quintin, will welcome them. Congratulatory addresses will be received from the British Association, the Royal Society of London, the Royal Society of Edinburgh, the University of Sheffield, the Geological Society; from the Society of Antiquaries, the Royal Institute of British Architects through Mr. Paul Waterhouse, M.A.; the British Museum, the Natural History Museum, the Victoria and Albert Museum, the Cambridge Philosophical Society, and the Sheffield Literary and Philosophical Society. The Lord Mayor of York will propose a vote of thanks to the delegates, and tea will then be served on the terrace, after which at 4.15 a procession will be formed of members, delegates, and guests (in full military, civic, and academical dress), and will walk to the Minster, where a short service will be held, and an address will be given by the Bishop of Beverley. In the evening a *conversazione* will take place in the Museum and Tempest Anderson Hall.

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Light as an Element in Decoration.

The important part played by artificial light in decorative schemes is apt to be overlooked. The point has often been emphasised at meetings of the Illuminating Engineering Society. It has also been pointed out that lighting effects in turn are much influenced by the system of decoration. A white ceiling, when new, may be expected to reflect as much as 80 per cent. of the light it receives: very light grey, green, or pink papers may reflect 60 to 70 per cent.; intermediate colours, 30 to 50 per cent.; the darker shades much less, while very dark papers may return only 5 to 10 per cent. of the light they receive.

Undue loss of light through absorption not only diminishes the available illumination but has the drawback of suppressing the valuable "diffused" light coming from all directions that helps to soften shadows. In semi-indirect lighting colours of walls and ceiling play an exceptionally important part. It is inadvisable to use this method of lighting unless good white ceilings are available and can be maintained clean. In a recent test it was shown that refinishing some discoloured walls and ceilings alone increased the available illumination by 50 per cent.

In rooms panelled in very dark wood lighting needs to be executed with special care. At a recent discussion of the Illuminating Engineering Society some interiors of public buildings decorated in this way were described. One Council Chamber, finished in very dark walnut, was lighted by a central cut-glass chandelier fitted with imitation candles and gas-filled electric lamps. Whatever one may think of the merits of such chandeliers their use amidst such dark surroundings should not be encouraged, as the contrast becomes too glaring. Another room, similarly panelled in dark walnut, was illuminated by concealed cornice-lighting, so that all light was received by reflection from the white ceiling. This effect also struck one as peculiar. It is doubtful whether total indirect lighting gives a good effect when the walls are so dark. It seems to accentuate the height of the room, and gives one the feeling of being imprisoned at the bottom of a well.

The nature of the painted surfaces, *i.e.* whether matt or glossy, is also of interest from the lighting standpoint. Illuminating engineers prefer that walls with a dull finish should be used; otherwise reflections of light sources are apt to be distracting. A committee of the Illuminating Engineering Society which inquired into the lighting of schoolrooms some years ago recommended that schoolrooms should be finished with warm white ceilings, that walls above the dado should be light in tint, and that glossy and polished surfaces should be, so far as possible, avoided.

Good lighting, doubtless, should be unobtrusive. Yet the lighting units may themselves play a part in the scheme of decoration. The first requirement is obviously that the source of light should be so shaded as to be of mild luminosity, agreeable for the eye to rest upon. Silk shades, either of a tint similar to the surroundings or of a colour forming a pleasing contrast to them, give a pleasing effect, but are apt to harbour

dust. If semi-indirect lighting is used this difficulty can be overcome by enclosing the silk within two concentric clear glass bowls, the inner globe of prismatic glass, so as to reflect the majority of the light upwards.

A point that has been much debated by lighting experts is the treatment of interiors decorated in some distinctive style of the past. It is usually held that the fittings should also conform to the general period of design. Yet the mere introduction of gas or electric lamps in a fitting originally designed for use with candles is an anomaly. The best that one can do is to screen the lights in such a way that their nature is not evident. But in modern buildings it may justly be contended that we should not continue to perpetuate styles of fittings intended for use in the age of candles, but should develop new fittings designed in accordance with the requirements of the present age—the age of electricity.

There are many possibilities in lighting which did not exist in the past. Amongst these is the use of "artificial daylight"—*i.e.* electric lamps equipped either with special tinted bulbs or with suitable screens, such that the light is converted into a close resemblance to normal daylight, revealing colours in their natural tints. Small units of this kind may be used to illuminate pictures, cabinets of china, and other objects whose delicate colours might be imperfectly revealed by ordinary illuminants. Alternately one might construct an artificial skylight, flooding the room with artificial daylight, and imitating more completely the conditions of natural lighting.

There is another possibility in the use of artificial light for decorative and artistic effects that seems to have been strangely overlooked, namely, the illumination of pictures and other surfaces by *transmitted* light instead of light falling on them from the front. The artist painting a picture on canvas in opaque colours, illuminated from the front, is at a great disadvantage. The greatest variation in tone possible with ordinary pigments does not exceed about 20 to 1, whereas in natural scenes and landscapes a range of brightness of 100 to 1, or even 1,000 to 1, is probable. A sunset, with a range in brightness that is very great in comparison with fields, trees, or other objects in the foreground, can be only imperfectly rendered by conventional methods. Moreover, even such contrasts as the painter can execute are apt to be lessened and masked by a mist of scattered, reflected light from the surface. This occurs especially with oil-paintings, while in pictures framed in glass reflections of surrounding objects are particularly tiresome. The restrictions imposed by the limited tones of pigments have been acutely realised by certain artists in the past. Thus it is recorded that Turner, seeking to increase the darkness of a foreground in one of his pictures, pasted on some figures cut out of black paper. Yet artists to-day have not seriously considered the possibility of securing a much greater range of brightness by painting with translucent pigments on silk or semi-transparent linen. An artist to whom the writer offered this suggestion contemptuously dismissed it with the remark

that it was not Art. In using this method one would construct behind the picture frame a shallow box, with white interior, fitted with electric lamps and giving a uniform illumination. In front of this would be a sheet of glass on which the translucent picture to be illuminated is placed. Some Japanese paintings on silk would appear to great advantage if lighted in this way. If desired, one could use "artificial daylight" lamps to obtain natural appearance of colours.

The idea is familiar in some of the highly artistic hand-painted lamp shades. It has also been used with success in the pictorial advertisements used outside cinema theatres, etc., and there is now no great technical difficulty in getting pigments and linen of the desired translucent properties. But it has not yet been studied in the higher fields of art. There seems no doubt that the method would give a much greater impression

of depth and preserve more completely the illusion that one is looking at an actual scene or landscape. If paintings so illuminated could be fitted into recesses in the walls of a room one would obtain a pleasing substitute for the real windows, by receiving the impression that one was looking out at an orchard, a river view or mountain scenery—an impression that is only very imperfectly conveyed by a painting illuminated in the ordinary way from in front. We should thus have a new decorative method, which would add greatly to the artistic possibilities of an interior, and enable effects to be secured that cannot be achieved at present. A particularly interesting development would be the selection of scenes in keeping with the period of the interior, giving the impression that not merely the contents of the room but the things outside of it also belong to a bygone age.

Our Illustrations.

PRELIMINARY SCHEME FOR A SEASIDE RESORT NEAR MALAGA, SPAIN. MESSRS. THOMAS H. MAWSON & SONS, Architects.
PALAZZO MARCELLO DURAZZO, GENOA, by GAL. ALESSI. Drawn and measured by P. D. HEPWORTH.
T.S.S. "ANDANIA": CUNARD STEAMSHIP CO. LTD. MESSRS. SHEPHEARD & BOWER, Architects.

The directors of the Cunard Line, adopting the far-sighted and progressive policy which has been an outstanding feature of the line, embarked on an extensive shipbuilding programme shortly after the conclusion of the war.

The "Andania" is the fifth of the new ships in this programme to be put into commission, and is one of the six ships of her type which will carry only cabin and third class passengers.

The "Andania" is of the following dimensions:—

| | |
|------------------------|-----------|
| Length overall | 540 feet. |
| Beam | 65 feet. |
| Depth | 43 feet. |
| Tonnage | 14,000. |
| Speed | 15 knots. |

Accommodation for passengers:—

| | |
|---------------------|--------|
| Cabin | 500. |
| Third class | 1,200. |

She is classed 100 A1 at Lloyd's, and has been built under special survey. She is also built to comply with the International Convention requirements and British and American passenger laws, and has been designed specially for the Cunard Canadian service.

Saloon.—The saloon is situated on "D" deck (with immediate service from the kitchen department adjoining), and is treated in a Colonial Adams manner. The portholes are arranged in groups of three, and a pleasant effect is obtained by enclosing each group within one architrave, behind which drawn curtains are hung, producing the effect of a series of large windows extending from floor to ceiling. The colour scheme is in shades of ivory white,

with rich blue curtains and gold trimmings. Fine Spanish mahogany furniture throughout is treated in harmony with the decorative scheme and arranged in groups of small tables accommodating two, four, or six persons each, and independent chairs are provided. The centre portion of the saloon is carried up into the deck above, forming a central dome, with musicians' gallery on one side and on the other side the main staircase landing. The other two sides of the dome are enriched with semi-circular shaped fresco paintings in tempera. The architects commissioned Mr. G. W. Harris and Mr. W. Alison Martin, two Liverpool artists, to carry out these paintings.

Staircase.—The main staircase leads from the after end of the saloon, and, passing through intermediate decks giving access to passengers' state rooms, etc., terminates in the writing room on "A" deck. The staircase is planned on handsome lines, and rises easily in short flights, having a wide central and two return flights to each deck. The stairway is of the open type, and has a continuous wreathed handrail, supported on wrought iron balusters. Extending as it does from "D" deck to "A" deck, the staircase, panelled throughout, forms a notable feature of the ship.

"A" Deck.—This is the promenade deck, and here is arranged a suite of entertaining rooms, comprising writing room, lounge, smokeroom, and verandah café, together occupying the whole of the available space.

These rooms are all lighted by large sash windows which are sheltered by the boat deck, and through which the view to sea is gained across the promenade deck. The centre portions of these rooms are carried up several feet above the boat deck, giving added height and importance to them, and allowing a happy effect of clerestory lighting by means of lunettes.

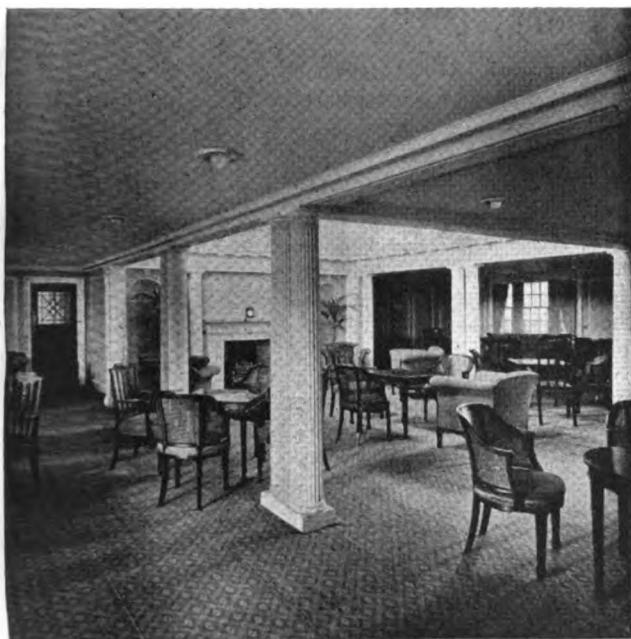
Writing Room.—This room is designed in a style in keeping with the saloon, but detailed in a rather more delicate manner, as it serves as the drawing room of the ship. A fireplace is provided at the forward end. The colour scheme is in shades of French grey with curtains in old gold and blue trimmings. The furniture is arranged in groups of small tables for writing and occasional tables and settees harmonising in colour and designed in keeping with the general treatment.

Lounge.—The architectural treatment of the lounge is of French influence in the detail and enrichment. The colour scheme is in shades of lavender. The touch of warmth in the colour of the old rose silk curtains and upholstery gives a note of comfort to the general scheme. An open fireplace stands in a comfortable recess in the centre of the room at the forward end.

Smoking Room.—This room is carried out in oak, the walls being panelled in this material throughout. The whole treatment, though kept in harmony with the other rooms, has more Florentine influence introduced into the design. Panelled pilasters, carried up to the full height of the ceiling, having dull gilt capitals and delicate enrichment on the upper part of their panels, combined with the ceiling beams also in oak, give a sense of dignity and repose to the general scheme of decoration. At the forward end a fireplace is arranged in a recess forming an angle provided with an open electric fire. At the after end a



S.S. "ANDANIA." CABIN DINING SALOON ON "D" DECK.



S.S. "ANDANIA" CABIN LOUNGE.

similar recess forms a bay window treatment, the large window of which gives an outlook on to the verandah café. The window hangings are in green and dull gold, and the furniture consists of large settees and easy chairs upholstered in leather harmonising in colour. This furniture is independent, and with chairs and settees being arranged in groups at separate tables, all the amenities and comfort of a first-class smoke-room are obtained.

Verandah Café.—The verandah café is approached direct from the promenade deck and smoke-room. The café is carried out in a simple treatment of French treillage consisting of panelled walls and pilasters. The fascination of the stern view has not been overlooked, and the passengers seated in the café gain full benefit of this through the large central window, the two side windows and the two large openings looking directly astern. For protection against bad weather the two large openings can be closed by sliding doors. The furniture consists of wicker chairs and tables arranged in groups round the windows giving the passengers the full benefit of the view to sea. With the treillage on a cream background a charming open-air effect is obtained, and by reason of the café's sheltered position it proves a very favoured resort.

Children's Room.—This room, which is on "B" Deck, was designed throughout by the Furnishing Department of the Cunard Company. An effect of cheerful cleanliness has been gained by panelling the room, breast-high, with sycamore, polished its natural ivory tint, and severe mouldings and enrichments dyed a bright red. A continuous frieze illustrates the principal incidents from "Alice in Wonderland." Two cosy inglenooks with seats have been built, the frieze on the three sides being painted with a large tree, whose branches extend over the cove and entwine on the ceiling. The effect gained is that of a garden arbour where the youngsters can have their "makebelieve" alfresco tea. Both the floor and the ceiling have been converted into sources of amusement and interest. The former is provided with an inlaid animal border, while the centre portion is inlaid with the necessary outlines for "hop scotch," "shuffle board," "marbles," etc. The latter is painted sky blue and sprinkled with silver stars; the lighting is obtained through the conventional cheery-faced sun and the man in the moon. A large slate with a fitment for coloured chalks has been incorporated in the panelling, and a small library of favourite children's books is provided. The miniature furniture is comfortable and designed with an eye to hygiene. White enamelled, decorated with bright colours and with all awkward corners eliminated, it will delight most children who love to discover articles of their own scale.

The whole of the fibrous plaster ceilings, cornices and domes in the dining saloon, lounge, writing room, and smoking room were executed by Messrs. G. Jackson and Sons, Ltd., 49, Rathbone Place, London, W.

Among the other sub-contractors were Messrs. Gillow and Co. (Waring and Gillow), Lancaster, woodwork; Kingsmill Art Metal and Electric Co., 142B, Fulham Road, S.W., wrought iron balustrades; Thomas Elsley, 20 to 30, Great Titchfield Street, W., decorative lunettes; E. A. Clark, Ltd., 6, Stanley Street, Liverpool, firegrates; Berry's Electric Co., Ltd., 86, Newman Street, W., electric stoves.

Exhibition of Contemporary British Architecture.

An Exhibition of Contemporary British Architecture will be held in the Galleries of the R.I.B.A., 9 Conduit Street, W.1., from November 1 to December 9, 1922.

The following arrangements have been made for the organisation of the Exhibition:—

(1) All architects in the British Empire are invited to submit their work.

(2) Work that has already been exhibited elsewhere will not be excluded.

(3) Exhibits must be confined to works executed or illustrations of works projected since the beginning of the Twentieth Century.

(4) All exhibits must be framed and may be glazed.

(5) There is no limit to the number of works which may be included in one frame.

(6) Models will not be accepted for exhibition.

(7) Exhibits may consist of photographs, elevations, perspective drawings and small scale plans. The exhibitor may choose whether he will send any or all of these. Photographs of drawings are admissible.

(8) As the available wall space is very limited, it is anticipated that not more than 15 square feet of wall space (inclusive of frames) can be allotted to any exhibitor.

(9) Charges for packing and transport of exhibits to and from the Exhibition must be defrayed by the exhibitors.

(10) An insurance policy will be taken out for the exhibits while they are in the custody of the R.I.B.A., but the R.I.B.A. will incur no legal liability for loss or damage.

(11) The last day for the receipt of drawings and photographs will be October 7, 1922.

(12) All exhibits not accepted must be removed by exhibitors not later than October 22, 1922.

(13) The Exhibition will be open to the general public (free) between the hours of 11 a.m. and 6 p.m.

(14) There will be a Press View on October 30, and the Private View and Opening will take place on November 1, 1922.

Architectural Association Design Club.

The following arrangements have been made for Session 1922-23:—

Jury: Stanley H. Hamp (Chairman), Robert Atkinson and Howard Robertson (Vice-Chairmen), H. Chalton Bradshaw (Hon. Secretary), John Anderson, Ferdinand Billery, L. H. Bucknell, R. A. Duncan, H. S. Goodhart-Rendell, P. D. Hepworth, E. R. Jarrett, V. O. Rees, L. S. Sullivan, L. de Soissons and T. S. Tait. Members' Committee (to be re-elected).

R. J. Troup and J. H. Greenwood (Joint Hon. Secretaries).

All meetings will be held at 36 Bedford Square, W.C.1.

Subscriptions for year, £3 3s.; subscription for subjects, 10s.

Fees payable for at least three subjects, whether taken or not.

There will be no fee for Life Class, Sketch Subjects or Lectures.

Life Class will be held each week during Session on Thursday, 7.30-9.30 p.m.

Theory Lectures by Mr. Atkinson on Wednesdays at 5 p.m.

Subjects will form a graduated course.

Members who receive First Mention (M15) will receive £2 2s.

Two members of the Jury will attend during execution of each subject on two nights each week.

Dates and time allowed for each subject are given below, and no alteration will be made without due warning.

Application for membership should be made to the Jury and addressed to the Hon. Secretary.

PROGRAMME OF WORK.

GENERAL MEETING: ELECTION OF MEMBERS' COMMITTEE, ETC.,

WEDNESDAY, OCTOBER 27, 1922.

| Competition. | Sketch 12 hrs. Sat.- Sun. | Finished Drawings by 10 p.m. | Meeting of Jury 4 p.m. | Exhibition and Criticism 8 p.m. |
|-----------------------|------------------------------------|---------------------------------------|---------------------------------|---------------------------------------|
| | | | | |
| Subject I. 3 wks. . | 30 Sept. | 23 Oct. | 24 Oct. | 24 Oct. |
| 12 hrs. sketch . | 14/15 Oct. | 16 Oct. | " | " |
| Subject II. 3 wks. . | 28/29 Oct. | 20 Nov. | 21 Nov. | 21 Nov. |
| 12 hrs. sketch . | 11/12 Nov. | 13 Nov. | " | " |
| Subject III. 3 wks. . | 25/26 Nov. | 18 Dec. | 19 Dec. | 19 Dec. |
| 12 hrs. sketch . | 9/10 Dec. | 11 Dec. | " | " |
| Subject IV. 4 wks. . | 30/31 Dec. | 29 Jan. | 30 Jan. | 30 Jan. |
| 12 hrs. sketch . | 13/14 Jan. | 15 Jan. | " | " |
| 12 hrs. sketch . | 20/21 Jan. | 22 Jan. | " | " |
| Subject V. 4 wks. . | 3/4 Feb. | 5 Mar. | 6 Mar. | 6 Mar. |
| 12 hrs. sketch . | 17/18 Feb. | 19 Feb. | " | " |
| 12 hrs. sketch . | 24/25 Feb. | 26 Feb. | " | " |
| Subject VI. 5 wks. . | 10/11 Mar. | 16 Apl. | 17 Apl. | 17 Apl. |
| 12 hrs. sketch . | 24/25 " | 26 Mar. | " | " |
| 12 hrs. sketch . | 7/8 Apl. | 9 Apl. | " | " |

Notes and Comments.

"Better Looking Houses."

Under the above title Sir Lawrence Weaver has contributed an article to "The Evening News," in which he points out that the houses recently built under the Government programme mark an immense advance, though they are crippled by the effort to obtain the most economical result. Sir Lawrence thinks that recent building marks a tendency to return to the traditions of the eighteenth century, the great era of "sane" building. While we quite agree that much of our recent building is moulded on eighteenth-century lines, we feel that there are other and different movements working simultaneously. The houses of Mr. Baillie-Scott are certainly not formed on eighteenth century precedent, and these and other works of what we may call an earlier and freer school influence our modern building, and have been taken by many as a precedent. Both are good in their way, and the sum of modern building is enriched by contributions of both "schools." The work we could do without is that which seems to halt uncertainly between the two diverse impulses.

A Growing Want.

A visit to one of our greater provincial centres has served to emphasise what we have long felt—the great want which exists for the provision of good and reasonable hotel accommodation throughout the country. There is hardly any accommodation in quite important and popular centres between the expensive hotel whose charges are beyond the means of most people and the discomfort of the smaller inns which provide badly and inhospitably for the traveller. If a company could be formed which would provide good accommodation in all great centres, which need not be either temperance or licensed, but where the guests could order and introduce what they wanted in the way of drinks without trenching on the prerogative of the management, but the standard of comfort was such that travellers could depend on it as they depend on travelling facilities, we believe the scheme might meet with a great success if it were well organised and properly advertised.

Liverpool Cathedral.

Liverpool Cathedral is the subject of a letter signed "Anglicanus" in the "Liverpool Courier," the writer of which complains that the reredos is flamboyant in the extreme and more suitable for a Continental Roman Catholic cathedral than an English church. Its great height, we learn, obscures part of the inscription which runs round the building. We think that further study might convince the writer that screens and other interruptions frequently break up our older churches, while they add not a little to the sense of mystery and effect of scale, which are no small part of the claim of those buildings. The buttresses are criticised as being neither Gothic nor beautiful. It is difficult to combat the prejudice of those whose opinions are hidebound by prejudice and who alternatively condemn modern buildings for containing no new note or for being unlike what they are accustomed to. While it would be impossible to satisfy "Anglicanus," we believe posterity will rank the new cathedral high among those which have descended to us from past ages.

Mr. Goodhue on Liverpool Cathedral.

It is pleasant, in the face of less competent criticism, to know that Mr. Bertram Goodhue considers Liverpool Cathedral to give every promise of being one of the finest cathedrals of the world. Mr. Goodhue has himself carried out some of the best churches which have been built in modern times, and is in an unusually good position to arrive at a sound and considered opinion. It is interesting to know that in his view the English architect is less hampered by his clients' wishes than his American cousins. In America he says an architect receives a commission to design a church of a given period, while here after the commission is given the architect is given a free hand. We doubt whether this is always the case, but it certainly should be, and we hope

that those who are about to build will give weight to the opinion expressed by one of the most eminent of contemporary American architects.

The Trade Union Congress and Unemployment.

The Trade Union Congress, now being held at Southport, blames the Government for the prevalence of unemployment and predicts a bad winter for the workers. We think the Government may reasonably be criticised, but though its foreign policy is open to much discussion, we do not believe it has contributed in any marked degree to the evils complained of. A contributory cause of unemployment is no doubt the heavy taxation of the country and the failure to cut down the enormous cost of departments. Labour is always urging the increase of governmental activities, and such increase can only result in heavier taxation, which diminishes the private employer's ability to give employment. In other words, as we have before pointed out, the working man is vitally interested in economy of administration, and the expenses of administration largely arise from the endeavour of Government to control activities which up to a few years ago were vested in private hands.

The Future of Devonshire House.

Mr. Beresford Chancellor urges that Devonshire House should be retained as a Club having a world-wide appeal under the title of the "International." It should, he says, be equipped in accordance with its decoration with furniture of Kent's design. London, he says, can ill afford to lose a house which has been associated with a past period of social distinction. It is easy to make such suggestions but very much harder to show how they can be realised. In these days when our best clubs are hard put to to meet their expenses, it is not easy to imagine a new club meeting with the support that would enable the promoters to pay even the smallest interest on the enormous cost of such a site as that of Devonshire House. Sorry as we are to see an old landmark go, we cannot see any help for it, though we hope the site will be utilised for the erection of a really good architectural building.

Masonic Headquarters.

At the quarterly meeting of the United Grand Lodge of England the subject of the provision of Masonic Headquarters was discussed, two sites being under consideration, one that in Great Queen Street, Kingsway, which has been the headquarters of Masonry for a century and a half; the other a block of property facing the Thames Embankment, west of the Hotel Cecil, and near Charing Cross, having Adelphi Terrace as its main front. This alternative site would, it is said, cost from £300,000 to £350,000 more than the present site, but it would undoubtedly be a much finer position, and we are inclined to think the Freemasons would be amply justified in selecting it, as there are few movements whose future can be looked forward to with greater confidence than that of Freemasonry.

Mr. G. Topham Forrest, F.R.I.B.A., has been appointed to represent the Royal Institute of British Architects at the International Housing Congress, Rome, from September 21-26, 1922.

During the recent restoration of the Gate of Honour of Gonville and Caius College, Cambridge, plaster casts were made of some of the more interesting details, and a set of these casts, twelve in number, has been presented to the Victoria and Albert Museum by the Master and Fellows of the College. This Gate, one of the most pleasing works of the early Renaissance in England, was erected in 1574, traditionally by an architect named Theodore Haveus, a native of Cleves, but more probably by Dr. Caius himself, who refounded the College and was responsible for the Court on to which the Gate of Honour opens. The casts have been placed on exhibition in the Central Court of the Museum.

Mantua: Her Story in Art and Architecture.*

By SELWYN BRINTON, M.A.

IV. The Coming of the Gonzaga.

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We have now reached the point in Mantuan story when, by the dramatic fall of the Bonacolsi, the Gonzaga family, under Luigi Gonzaga, as Captain of the people, entered into the Lordship of Mantua. Their power, acquired, as we have seen, by a successful plot, was to be preserved by them for many generations. This event becomes, therefore, far more than a quarrel and act of vengeance between two rival noble houses: it marks the founding of a great and cultured dynasty, which was to set its mark indelibly upon Italian history and to survive the overthrow of Italy of the Renaissance under the armies of Charles V. The reason for this result seems to have been that the moment was ripe for the power of great princely houses in place of the weakening Republics, already exhausted by the strife without of city against city, and within of noble and people, or of Guelph against Ghibelline: the Bonacolsi despot had thought himself secure, but had failed to set the roots of his power deep in the people's willing affection. The Gonzaghi from the first achieved this, and this was the source of their splendid power, which remained for ages unshaken by war-perils without, and what must have been frequently grinding taxation within the Mantovano to support a Court which was one of the most brilliant in Italy.

Let us return now to our story, which we left at Passarino Bonacolsi's death, struck down as he rode out from the gateway of his Place. "As soon," says the Chronicler, "as Passarino was dead, and his friends and supporters captured or scattered abroad, the governance of the City of Mantua was assigned to Luigi Gonzaga, in the year thirteen hundred and eight. With the consent of the people, and according to the laws and good customs of the city, one person was of their own free will chosen to whom and to whose successors the rule should be given for ever (in perpetuo). . . . That Prince is worthy of his subjects' affection who is ready to set aside private wrongs and skilled to heal those wounds of the body politic, yet neither so easy nor so clement and generous that in healing the one he lets the whole body decay. Such was, indeed, the rule of Luigi Gonzaga in Mantua."

I have suggested above some of the causes which made this new dynasty permanent; but much was no doubt due to the wise policy of the new ruler. "The liberty of the people," continues that faithful servant of the Gonzaghi, Mario Equicola, "consists in two things, in laws and their carrying out judicially (giudicii); and when these are prevailing without respect of persons in a city, then that city may be called free. Luigi, therefore, was intent on renewing the down-trodden laws, and on making the old and good customs equally observed. Like a good father of a family, he restored the wasted estate, and preserved with new supports what was fallen from further ruin: with recollection of the past he looked to the future and disposed the present." Probably the citizens of Mantua recognised what we can see more clearly now, that in all likelihood the best fate for their city, too turbulent and divided for freedom, too rich and important to be left alone by her neighbours, was this strong and fairly just rule of the Gonzaghi. For this dynasty in fighting for their own independence and security were also preserving the independent existence of their State, threatened on every side by powerful rivals; while in filling their brilliant Court with artists, poets, and Humanist scholars, in taking the new culture under their direct and splendid patronage, in adorning their palaces with masterpieces of art and Mantua herself with noble churches and public monuments they were giving a new splendour to their ancient city. Indeed that true friend to the inquiring traveller, Baedeker, is not overstating the case when he exclaims: "C'est à la maison des Gonzague que la ville dut sa prospérité."

There were two clouds which very soon appeared on the horizon, two dangers which threatened the newly found

dynasty, and which needed all Luigi Gonzaga's tact and policy to avoid or master; and these two storm clouds threatened to become united. Equicola mentions that Guido Gonzaga, father of Luigi, had five sons, all of whom were living in his day; and Guido himself had a yet larger family of male descendants. In the year 1340 three brides had entered the city for the Gonzaghi; one, a Malaspina maiden, for Luigi himself, another of the Beccaria of Pavia for his son Corrado, a third from the great Verona family of the Della Scala for Ugolino, son of Guido, Luigi's first-born; and great were the doings when "the ladies all made their entry together, and the above-mentioned lords were present to meet them, and to them were given thirty eight robes, and cups and vases of silver, and twenty-eight horses valued at 2,100 scudi—and great triumph was made." But the wedding feast which is thus described by old Gionta, and yet more fully by Equicola, with its presents of fur-trimmed robes of crimson velvet from Venice, and the gifts of the Beccaria, Malaspina, Carrara, Pallavicino, and the Lords of Correggio, soon gave place to the sound of war.

There came to Mantua (May 24, 1348) the herald of Luchino Visconti to avenge the hatred he bore against Ugolino Gonzaga, of whom report said that he had wronged the said Luchino's wife. This quattro-cento scandal is given in detail by the Mantuan Chronicler, but there was possibly deep policy of state behind the quarrel. The Visconti of Milan were then becoming the greatest power of Italy, the serpent of their device absorbing by policy, treachery or war the lesser states; and Mantua, then, as now, the key to North Italy, was a tempting morsel. In any case on this day of May in 1348 the Communes of Brescia and Cremona made common cause with Luchino, and sent their procurators and syndics with trumpeters to threaten war, save on concessions of Mantuan lands to their Communes. "That which with arms, honour and victory this city has manfully acquired with arms and honour has she will and power to maintain her own"—such was the reply of Mantua; "a noble reply" says her historian, "the more worthy of praise in that with Luchino were allied as confederates also the neighbouring cities of Ferrara and Verona, each of these their own equal in riches and power."

In the war which quickly followed Mantua bravely held her own, though pestilence (as often in the old times) followed on the track of war, and in the end her foes were driven back in September of that same year. Then in the year following, that of 1349, came the memorable visit of the great poet and scholar, when "Francesco Petrarca came from Padua to Mantua, desirous of visiting the birth-place of Virgil, and was received with great honour by Luigi Gonzaga and his son." Mantua under her Gonzaga rulers showed here already the love of culture and scholarship which was to be one of her greatest glories; but the war cloud from Milan had not yet spent its fury, and in 1357 Bernabo Visconti enters the Serraglio, the enclosure of Mantuan strongholds, burning, pillaging and making prisoners. Then the Mantuans in their turn enter the countryside of Milan, laying all waste, and finally storming the castle of Bernabo Visconti himself.

Peace comes at last and is sealed by the marriage of Ugolino, Luigi's grandson, to Caterina Visconti; and in the year 1360 Luigi Gonzaga himself went to his rest, in his ninetieth year. "A man of highest prudence," says his Chronicler, "and so esteemed in all things. His title, Captain-General, and Lord of Mantua, and perpetual Vicar there of the Empire."

Mr. George Dominic Stampa, of Appleby, Westmorland, formerly official architect to the Sultan of Turkey, designer of the Sultan's Palace, several mosques in Constantinople, the British Embassy at Therapia, and the Palace of the Khedive of Egypt, who died on July 14, aged 87 years, father of Mr. G. L. Stampa, the "Punch" artist, left estate of the gross value of £3,136, with net personality £3,047.

* Previous articles, December 23, April 7, and June 9.

Studies of the English Sculptors from Pierce to Chantrey.*

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(Concluded.)

I.—AGOSTINO CARLINI, R.A. (ob. 1790), is the most obscure figure among the Foundation Members of the Royal Academy. Born at Genoa, he first appears in England as helping the quack, Dr. Ward, to compound his notorious balsam; next as an exhibitor at the Society of Artists; next as a full-blown Academician. In 1769 he exhibited the model of an equestrian statue of George III., now at Burlington House, and in 1770 a wax model of Maritime Power and Riches, which is interesting to us because against it, in his copy of the catalogue, Walpole has scrawled the words, "Sings French songs," an entry which seems to indicate that Carlini had received his art training in Paris. He exhibited nine other works between 1771 and 1787, and, like Roubiliac, dabbled in painting at the close of his life. All this while he was touching up his masterpiece, the statue of Dr. Ward, of which more will be said later. In 1783 he was invited to send in a model for a statue of Lord Rodney, "to be erected in the parade of Spanish Town," Jamaica, but, like Wilton and Nollekens, declined the Academy's invitation; in 1783 he became Keeper of the Royal Academy, and a very bad keeper, too, to judge from J. T. Smith's account of the students' behaviour under his régime, though he held the office till his death. He was painted by Rigaud with his friends Cipriani and Bartolozzi; and though a dandy in "purple silk coat, scarlet gold-laced waistcoat, point-lace ruffles, and a sword and bag," on state occasions, he would walk from his house, No. 14, Carlisle Street, Soho, to Somerset House "with a broken tobacco pipe in his mouth, and dressed in a deplorable great coat." This curious figure, recalling Nollekens in this alternation of personal splendour and habitual squalor, produced some very fine work, and, if his known output is small, it is not inconsiderable.

With Wilton and others he was employed by Chambers on Somerset House, the two central figures on the attic facing the Strand, and the masks of the rivers Dee, Severn, and Tyne (the last reproduced in Brand's *Newcastle* (1789), on the keystones of the same front being his work, which, to judge from his one drawing in the British Museum, was completely consonant with Chambers' genius. Much more important are the works that follow, to judge from Nos. 1-5, the only ones now discoverable.

1. *Royal Academy*.—Bust of George III. in the entrance hall, an extraordinarily fine work, although Walpole noted it as "bad" in his Catalogue.

2. Plaster model of an equestrian statue of George III. Fine.

3. *Society of Arts*.—Statue of Dr. Ward, the quack, satirised by Pope and Hogarth. A monument of the Doctor's gratitude to his early assistant, since in order to make it famous, "and seen at the sculptor's studio, he proposed," says J. T. Smith, "to allow Carlini two hundred guineas per annum, to enable him to work at it occasionally till it was finished; and this sum the artist continued annually to receive till his death." There is no more delightful statue in London than that of this quack doctor, whose vanity prompted him to conceal the "claret nose," too obvious in pictures, by having himself depicted in marble, and whose good nature took this singular form of making his portrayer famous. The work is here reproduced by permission from a drawing in the possession of the Society of Arts, the original being for the moment inaccessible.



STATUE OF JOSHUA WARD, from a drawing in the possession of the Society of Arts. By AGOSTINO CARLINI, R.A.

4. *High Wycombe*.—Monument to Sophia, Lady Shelburne (ob. 1771), in the parish church, a graceful work in the Rysbrack tradition, not hitherto mentioned among Carlini's productions.

5. Model for Beckford's cenotaph at the Guildhall, an excellent composition, known from the engraving by Bartolozzi, which, however, failed to get its author the commission.

6. Model of William, Duke of Cumberland, in a hat with the "Cumberland Cock," bought by Nathaniel Smith at Carlini's sale in 1790.

7-10. Emblematical groups, four busts, unknown, R.A.

11, 12. Maritime Power and Riches, emblematical group in wax, of which, in November, 1768, he was advertising casts at £6 6s. each.

13, 14. Models for two monuments to Lady Milton and General Wolfe, R.A.

15, 16. Models of Neptune and Mercury, R.A.

This, even when we add a drawing at the British Museum, representing a vase between two seated women—a panel, obviously for some decorative work—is an astonishing meagre list for an R.A. of considerable taste and powers, who duly appears in Zoffany's famous picture of the Academicians, and was honoured by more than one Royal commission. Smith's picture of his untidiness may hint at indolence, and a perpetual annuity of 200 guineas a year, especially after the Keepership of the Royal Academy was added to it, must have raised him above the reach of

* For preceding articles in this series see:—Introductory Article, July 1; Nicholas Stone (1587-1647), July 8; Edward Pierce (ob. 1698), Sept. 2; Caius Gabriel Cibber (1630-1700), Sept. 16; Grinling Gibbons (1648-1721), Sept. 30; John Bushnell (d. 1701), Oct. 7; Francis Bird (1667-1731), Oct. 21; Peter Scheemaker (1690-1771?), Dec. 9 and Feb. 10; John Michael Rysbrack (1693-1770), Mar. 3 and April 7; Louis François Roubiliac (1695-1762), April 21, June 16 and June 23; Joseph Wilton (1722-1803), June 30; Some Minor Sculptors, July 21, Aug. 11 and 18; Thomas Banks, R.A. (1735-1805), Aug. 25; John Bacon, R.A. (1740-1799) Sept. 8.

want. It is a matter for especial regret that his George III. at the Royal Academy was never carried out in bronze, equestrian statues of its quality being rare indeed in English art.

II. PETER MATHIAS VAN GELDER OR VANDERGELDER.—We are in worse case even with van Gelder than with Carlini, since his very Christian name has not hitherto been published, and the years of his birth and death are still unknown. Flemish, presumably, by birth or by descent, he first appears as an apprentice "at Mr. Morton's, Air Street, Piccadilly," in 1768, when he exhibited at the Free Society of Artists "an ornament of flowers, a drawing," on the strength of which Mr. Graves has reckoned him among the painters. In 1771 he gained a gold medal from the Academy for a bas-relief of "The Choice of Hercules," and five years later was thus described by the youthful John Deane, himself an apprentice of Carter's, in a letter quoted by J. T. Smith: "Nollekens got most of his money by buying and selling antiques. Van Gelder, who cut that large figure in our shop, and is considered one of the best hands in London at foliage, was seven years in saving a thousand pounds by keeping men at work in his own house, while he got two guineas a week at Mr. Carter's; he has now set up for himself (in Ridinghouse Lane)." As the story is usually told, van Gelder next emerges as the sculptor of Adam's famous monument to Major André in Westminster Abbey, on which he signs himself van Gelder.

"One of the best hands in London at foliage" was, evidently, not a painter at all, but this work—"ornament of flowers, a drawing"—was a study for a decorative carving, and this view fits in completely with his career, first in Carter's and then on his own account. His employment by Adam on the André monument made the absence of other works remarkable, since Adam was not likely to employ upon a royal commission a sculptor who had not already made his mark. At Warkton, the little church made glorious by the Roubiliac monuments to the Duke and Duchess of Montagu, already illustrated in "THE ARCHITECT," is



MONUMENT TO THE DUCHESS OF MONTAGU IN WARKTON CHURCH, NORTHANTS. Designed by ROBERT ADAMS. Executed by P. M. VAN GELDER.

an enormous work, signed in full "Peter Mathias Vander-gelder." This is the monument to Mary, Duchess of Montagu (ob. 1775), and represents the objects of her charity, a bent old woman, and a widow with two little children, weeping over her urn, and visited by an angel with a message of consolation. This vast and impressive work is set in a circular Ionic temple adorned with reliefs and mouldings which bear the impress of Adam's genius. It is clear, therefore, that Adam, who in 1773 had published a design of a Garden Seat, commissioned by the Duke of Montagu, was applied to later to design this larger and more important work for the same patron, and that the sculptor to whom he entrusted the execution—as years before he had entrusted his Kedleston monument to Rysbrack's chisel—was the very Vangelder or Vandergelder to whom he afterwards handed over the execution of his design for the André monument. The latter was in position in 1783—so much we learn from an engraving of that date by Thomas Ravenhill; and though its subject has always rendered it one of the most popular works in the Abbey, both with English and American visitors, the repeated removal of the heads of Washington and André gives the original engraving, and still more the various studies for it made by Adam in the Soane Museum, considerable interest. But it is a much less important work, whether as a sculpture or design, than the striking monument here reproduced, which must rank the obscure Vangelder among the foremost sculptors of that rather undistinguished decade, 1773–1783, when the older school of sculptors had passed away, when Bacon, Banks and Nollekens had only begun to show their powers, and when Wilton had begun to decline into the inglorious position of merely designing on paper what he left his pupils to carry out in clay and stone. It is, moreover, of no small interest to find a wholly unrecorded work designed by Adam, in his most characteristic style, and of a class which he least often touches, that of lofty monumental art.

III.—HENRY WEBBER is a yet obscurer figure. In 1776 he received the Academy's gold medal for the oval medallion of the Judgment of Midas in the Soane Museum, an excellent relief of the pictorial order; and in the same collection is his model of Hercules holding Cerberus, a work in the round of which Mr. A. T. Bolton, F.S.A., justly says that "the general effect is reminiscent rather of a piece of Dresden china than of the sobriety of sculpture." Mr. Bolton also tells us that Webber, then resident modeller at the famous Wedgwood works at Etruria, was recommended by Chambers and Reynolds, and went to Rome in 1787; that he exhibited at the Royal Academy in 1775 and 1779, as well as in 1776, is also known.

But two important monuments can also be assigned to him of which previous writers have said nothing, one of which has the distinction of having been damned by Charles Lamb in no measured terms—how justly the reader will judge from the plate in G. Lewis's *Monuments of Genii of Westminster Abbey and St. Paul's*, vol. II., p. 495. It is the monument erected in memory of Garrick by his friend and solicitor, Albany Wallis, in the Abbey, representing Garrick drawing apart the curtains veiling a medallion of Shakespeare, with Tragedy and Comedy seated at his feet. On the pedestal is the inscription by Pratt, which Lamb justly stigmatised as "this farrago of false thoughts and nonsense," and which is followed by the brief note: "This monument, the tribute of a friend, was erected in 1787. Webber fecit." On its completion evidently Webber set off for Rome. To quote Lamb's Essay on the Tragedies of Shakespeare is needless; but its opening sentence, "Taking a turn the other day in the Abbey I was struck with the affected attitude of a figure, which I do not remember to have seen before," will not be judged too severe by those who examine the original. It is worth noting, however, that Webber would not have had this commission if the Irish sculptor, John Hickey, had lived. Edmund Burke, writing to Wallis on January 15th, 1795, with reference to the proposed monument to Garrick, for which Hickey had been making a design, says: "Death is in close pursuit of us. . . Whilst Hickey was meditating a monument to Garrick, he is himself carried to the grave. . . . If poor Hickey had

been spared to us, I should not have proposed any sculptor living to him. But as he has gone, I do not know anyone more fitted to fall in with your views than Mr. Banks." Banks, as we have seen, did not get the commission, with the result that Charles Lamb was "scandalized at the introduction of theatrical airs and gestures into a place set apart to remind us of the saddest realities," and that we are able to carry Webber's career far beyond 1787, the year of his journey to Rome.

The second monument by Webber, in the Cathedral at Newcastle, is to a member of the Askew family, and was erected in 1796, at a time, that is, when Webber's commission for the Garrick monument had brought him into notice. Though Webber was, to be honest, a poor monumental sculptor, he is at least the author of one good relief, that in the Soane Museum; and the interest attaching to his Garrick through Lamb's famous attack entitled him to a niche in the temple, if not of Fame, of Notoriety.

Cheap Dwellings in Brussels.

Recently we gave some particulars showing the energy with which the building trades in Belgium have attacked the problem of reconstruction. It is calculated that by the end of the present year Belgium will have expended about 16 milliards of francs on the restoration of the country. The accompanying photographs suggest what is being done in Brussels towards the provision of accommodation for workmen and the poorer middle class. They show the block erected at Schaerbeek—one of the six to twelve buildings being put up in each of the Brussels suburbs. Each block is arranged as a hollow square with large centre garden, and is constructed to accommodate 156 to 160 families in self-contained flats of 3, 4 and 5 rooms, each having an outside balcony, w.c., and refuse shoot, electric light, gas and water. The rent is from 45, 50 to 90 francs per month, according to number of rooms and the floor. There are 4 shops, one at each corner, and for these the tenants pay 100 francs per month. The



TENEMENT DWELLINGS AT SCHAERBEEK, BRUSSELS.



TENEMENT DWELLINGS AT SCHAERBEEK, BRUSSELS.

building in question cost freehold 3,100,000 francs, which at present rate of exchange amounts to about £60,000. The co-operative society formed under the auspices of the local council is securing good interest for its outlay.

Art and the Olympic Games.

A communication has been received from the Marquis de Polignac, President of the Art Sub-Committee of the French Olympic Committee for the Olympic Games of Paris, 1924, with reference to a "Concours d'Art" which will form an integral part of the Eighth Olympiad.

It has been from the beginning the purpose of those who have revived and organized the Olympic Games to associate Art and Thought with athletic exercises. The Congress of Art, Literature and Sport, convened in Paris (1906) by the International Olympic Committee resolved to establish competitions in Art and Literature.

The French Olympic Committee will give to these competitions a special importance in the Eighth Olympiad.

The competitions will be international, and will be five in number, viz. :—

Architecture, Literature, Music, Painting, Sculpture.

As in the Olympic Games of Ancient Greece, the prizes in these competitions will be identical with those for the Athletic contests, viz. :—

1st prize, Silver gilt Olympic medal

2nd prize, Silver Olympic medal

3rd prize, Bronze Olympic medal

These prizes will be distributed by the President of the Republic at the same time as those of the athletes.

Further details as to entries, etc., will be issued later. It is sufficient for the present to state that the competitors will be absolutely free in the choice of their subject, and in the form and dimensions of their work. The only condition imposed is that the work shall not have been previously published or exhibited, and that it shall be directly inspired by the idea of sport.

Communications may be addressed either to Marquis de Polignac, 11 Rue Anatole de la Forge, Paris (170), or to one of the British members of the International Olympic Committee, viz., Colonel R. J. Kentish, C.M.G., D.S.O., Army and Navy Club, Pall Mall, S.W.1, or Rev. R. S. de C. Laffan, 1 Brunswick House, Palace Gardens Terrace, W.8.

A partnership has been entered into between Mr. A. G. Heiton and Mr. J. S. McKay, who will practise as architects under the name of Messrs. Heiton and McKay, at 72, George Street, Perth. The firm is an old one, Mr. Andrew Heiton (senior) having commenced practice in Perth in 1830. His son Andrew Heiton, Jun., greatly extended the practice and assumed his nephew, the present representative of the name, as partner in 1892, since when much work has been carried out throughout Scotland. Mr. J. S. McKay is a former assistant of the firm, who during the war held a R.E. commission and served in Macedonia, France and on the Rhine. On demobilisation he entered the office of Messrs. John Burnet, Son & Dick, Glasgow, which he has just left. Mr. McKay won the open competition for Kirkcaldy War Memorial, and his was one of the five pre-miated designs in the Greenock War Memorial Competition.

Some Problems in Sanitation.

At the thirty-fifth annual conference of the Sanitary Inspectors' Association, which was held at Buxton last week, a paper on the above subject was read by Mr. H. D. Searles Wood, vice-president R.I.B.A.

Dealing with the smoke nuisance, Mr. Searles Wood said that the new Smoke Abatement Bill now before the House of Lords will, if passed into an Act, mark a great advance, but it still left the domestic chimney untouched. In the interesting book, "The Smokeless City," the Lord Mayor of Manchester and Miss Marion Fitzgerald demonstrated that the domestic chimney was responsible for some three-fourths of the smoke in this country. The first step on the road to success was to realise that the house chimney was a much more dangerous enemy than the factory chimney, both because domestic smoke was far greater in quantity and far more harmful in quality than factory smoke; and because factory smoke was already rapidly decreasing and will almost certainly be immensely reduced in the next ten or twenty years. There existed an extraordinary lack of knowledge as to the efficiency of the various kinds of apparatus, the worst example being the coal fire. It was only in the gas industry that really effective research had been carried out. Mr. Searles Wood said he wished to make it clear that he held no brief for either gas or electricity. The friendly rivalry between those two methods of obtaining light and heat without smoke was all to the good; it was very interesting to note how each advance in either stimulates the rival to produce some improvement.

In regard to meeting the shortage of houses, Mr. Searles Wood said that the Ministry of Health was most anxious for it to be known that by-laws could be revised periodically. The rural (IVa) model dealt only with health matters, of course; there were no restrictions for stability or prevention of fire. The model form IV had the modified clauses exempting buildings above the damp course from the section regulations, the thickness and material of walls, and in the reprint of July-August, 1922, these exemptions were being extended to allow four buildings instead of two, provided that if more than two in a block the walls are incombustible. The increased freedom under the model by-laws called for greater skill in those who had to look after sanitary matters. He was sure that the service which had so well carried out its duties in the past would be equal to the occasion.

The movement for amending by-laws regulating the height of buildings will, if successful, have a marked effect on the sanitation of our large towns. The conditions under which high buildings were allowed in London at present, he said, were largely governed by the opinion of the Fire Brigade Committee, but modern appliances had overcome the difficulty of projecting water to the increased height, and the problem now was purely a sanitary one. One of the drawbacks to existing rules was that new buildings were being driven down several storeys below the road surface to get the accommodation required. An example being a new building at Oxford Circus which has a basement storey on a level with the tube railway. The present by-laws limited the height of a building to 80 feet, and two storeys in the roof. Those who advocated the higher buildings asked that the height should be 120 feet in certain suitable situations where proper space was available round the buildings. There was also a movement to increase the cubic content of buildings, which at present is limited to 250,000 cubic feet. In both cases the London County Council possess power to allow increased height and area, and there have been several buildings recently erected which exceed those limits.

With regard to the sanitary aspect of the question of the space round high buildings, it was suggested that in a street of greater width than 80 feet an increased height should be permitted equal to the greater width of the street, with two fire-resisting roof storeys above the same, but no greater height than 150 feet exclusive of the two roof storeys; that a height of 150 feet be permitted opposite certain open spaces, etc., and in the City of London buildings of 120 feet be permitted in any street, irrespective of its width. Further that such consent should be subject to adequate safeguards as to health, means of escape and fire attack. The highest commercial building in this country was the Royal Liver in Liverpool, which was about 300 feet.

Those who opposed the high building proposals gave New York as an example, where the traffic congestion at certain times of the day, when high buildings were being vacated, was very great, and access of light and air to the storeys near the ground was bad, although New York had a greater intensity of light than London. Any additional height to buildings in London must increase the congestion of traffic and put an additional strain on the public services, water supply and drainage, and on the vehicular traffic for both passengers and goods.

Competition News.

The Secretary R.I.B.A. has received a cable from the promoters of the Auckland War Memorial Competition stating that the plans of competitors from the United Kingdom have been received, and that the award is expected at the end of September.

Mr. Campbell, the Director of Housing in Edinburgh, submitted at last week's meeting of the Housing and Reconstruction Sub-Committee of Edinburgh Town Council the conditions upon which plans are to be prepared by architects for competition in connection with the proposed erection of tenement houses at Jeffrey's Brewery, Grassmarket.

Twenty-eight sets of plans for developing a large area of land acquired by the Ramsgate Council on the western cliffs were submitted in competition for the prizes offered by the council, and the award of the adjudicator, Mr. S. D. Adshead, is as follows:—

1st (£300), Messrs. W. Harding Thompson and P. D. Hepworth, Verulam Buildings, Gray's Inn Road, London; 2nd (£200), Mr. G. T. Morris, 37 Chancery Lane, London; 3rd (£100), Messrs. Franklin and Deacon, 33 King Street, Luton, Beds.

The rebuilding of St. Bartholomew's Hospital may be the subject of discussion by the General Court of Governors during the course of next year. According to "The Times," a resolution has been submitted by the Scientific Sub-Committee appointed in connection with the organisation of the celebration next June, the 800th anniversary of the founding of St. Bartholomew's Hospital by Rahere. It proposes that a competition be held under the direction of the President of the Royal Institute of British Architects, to provide architectural plans for rebuilding the hospital; and that a sum of money, not exceeding £1,000, be allocated for the purpose of providing prizes. It is intended by the Sub-Committee that if the suggestions should be adopted and any set of plans approved, these should figure in the commemoration volume. There is reason to believe that a considerable amount of opposition will be offered to any rebuilding scheme which may come before the Court of Governors.

The Concrete Institute.

An Extraordinary General Meeting of the Concrete Institute will be held at Denison House, 296 Vauxhall Bridge Road, London, S.W.1, on Thursday, September 28, 1922, at 6 o'clock in the afternoon, for the following business:—

1. To consider, and if thought fit to pass, a resolution "That the name of the Company be changed to The Institution of Structural Engineers."

2. To consider, and if thought fit to pass, a resolution "That Article 3 of the Memorandum of Association of the Company be altered by omitting the several objects numbered 1 to 25 both inclusive therein, and by substituting the following objects in lieu thereof, namely:—

"(a) To promote the science and art of Structural Engineering in any or all of its branches.

"(b) To enable Structural Engineers to meet and correspond and to publish or communicate information relative to Structural Engineering, including the constitution, properties, and use of materials.

"(c) Subject to the provision of Sec. 19 of the Companies (Consolidation) Act 1908, in any lawful manner to acquire, hold, and/or dispose of for the purposes of the Institution real and personal property and any rights or privileges necessary or convenient for the said purposes, and subject as aforesaid to exercise in respect of property of any nature, all the rights and powers of an absolute owner of property of that nature.

"(d) To do all such other lawful things as are incidental or conducive to the attainment of the above objects."

3. (a) To consider and if thought fit to approve the draft new Articles of Association which will be submitted to the meeting and in the event of the approval thereof with or without modifications, then

(b) To consider and if thought fit to pass a Resolution to the effect "that the new Articles of Association already approved by this meeting and for the purpose of identification subscribed by the chairman thereof be and the same are hereby approved, and that such Articles be and they are hereby adopted as the Articles of the Company in substitution for and to the exclusion of all the existing Articles thereof."

Should the above Resolutions be passed by the required majority they will be submitted for confirmation as special Resolutions to a second Extraordinary General Meeting which will be subsequently convened for 6 p.m. on Thursday, October 19, 1922.

A copy of the new Articles above referred to which have been prepared and approved by the Council can be seen at the office of the Institute.

On the Road in Holland.—II.

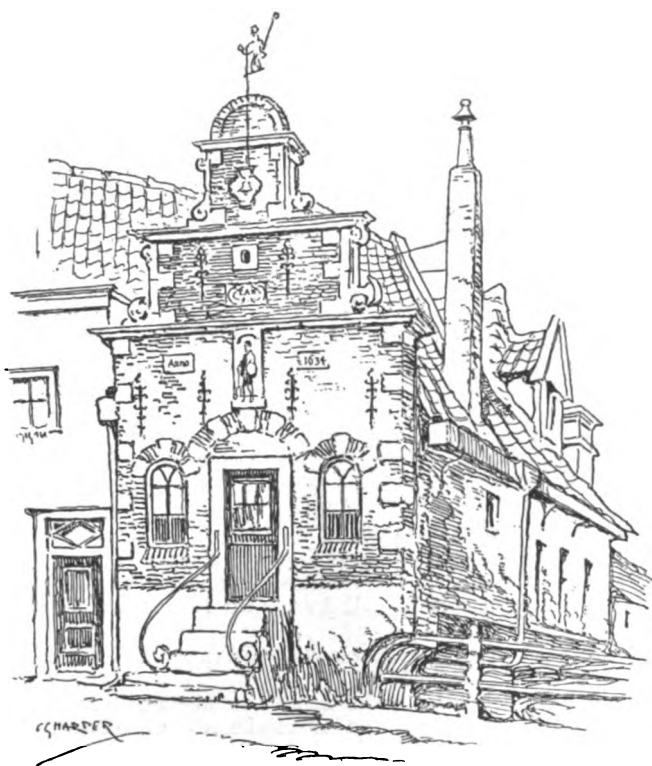
By C. G. Harper.

Long ago, in that centralising process which has converted the States-General of the Netherlands into the Kingdom of Holland, the throbbing life of the little Dutch towns was drained away to contribute towards the making of modern Amsterdam and Rotterdam. Some few other ancient towns of Holland exhibit an increase in modern times, but they are special instances—such as Haarlem, the highly-prosperous centre of the bulb industry, a region of floriculturists, and The Hague, the social and Court centre of the country. At Leeuwarden, too, up in the north, in Friesland, that centre of the cattle trade, there is expansion, and a garden-suburb in the interests of the working-class population is now in the making as a municipal enterprise. And a highly interesting and educative sight it is, too.

No, it will not do to think of Holland as a land where everyone is old-world and most people wear weird costumes. So in advance, in fact, is Leeuwarden that the great modern Roman Catholic church there is furnished almost com-

their ancient glories, we need not regret their decline, for only thus could we find preserved their architecture and decoration. We have heard much talk of the "dead cities of the Zuider Zee." Much of that is nonsense. The ancient towns (not cities) are not dead, but sleeping, and dreaming of their great past. Speaking of them generally, they are neither poor, nor shabby. If you would find shabbiness and poverty, go seek and find them abundantly in any rich and populous and increasing modern city—say, Amsterdam or Rotterdam, to say nothing of imperial London. The quiet old towns of Holland are in slumber; or, to change the figure, they are like some busy man who, at the close of a strenuous career, is taking his well-earned rest. Such is Franeker. There are the usual canals in the streets, and the rows of clipped lime trees beside them, and the Groote Kerke, and a beautiful Stadhuis, dating from 1591. Many a quaint gable adorns those streets. At Franeker, too, was a university, which existed from 1585 to 1811, when Napoleon suppressed it. And there is that delightful little red-brick building, dated 1634, on the "Zakkerdragerspiepke" (I apologise for the terrible name!), the "Bridge of the Grain Porters," pictured here.

At Bolsward, in this same district of Friesland, we find this queer tablet on a house: "Zo is Het, 1519," which, being interpreted, means, "So it is." The original house is gone, and so, evidently by the style of lettering, is the original tablet. We find a charming little town of 6,500 people. Its brick-paved streets are quiet and extraordinarily clean, and a steam tramway runs through the chief of them. Bolsward might be accounted a "decayed" town, but its cheerful aspect declares that, if, indeed, it were once larger, it is perfectly happy and sufficiently prosperous in



THE ZAKKERDRAGERSPIEPKE, FRANEKER.

pletely with stained-glass windows done in Cubist art, that "last word" in colour and design. Cubism in painting is suspect, especially when it is practised by those who overstep the mark and descend into vorticism and all its worst eccentricities. Both the duffer who welcomes these new gospels because they seem to give an opportunity to incapacity, and the self-advertiser who sees a chance of becoming profitably notorious, find their account in them. But, hearing of those windows, I went to see them, expecting the worst—and remained to admire. All the windows in the body of the church are in the Cubist manner, while those in the chancel are modern stained-glass of the conventional type, wherein characterless, emasculated saints, pictured in anæmic colouring, simper in that sickly fashion we know so well. Whether you regard saints as divinely inspired personages or merely as persons of noble minds and deeds, they must have been forceful in character. The conventional modern stained-glass design denies them so much. But the saintly and divine beings shown in these recent Cubist windows at Leeuwarden are rough-hewn and virile, and the colouring is strong.

But to hark back to our little Dutch towns, decayed from their olden wealth and power. Interested as we are in



STADHUIS, BOLSWARD.

its present scale. It is the ornate and beautiful Stadhuis, if not also the great fifteenth-century Martinikerke, filled with the monuments of nobles and wealthy traders of centuries ago, which in no uncertain manner advises you of a former greatness. The Stadhuis was built at a somewhat later period, 1614-16, and is in the Flemish variety of Renaissance architecture, built (as, of course, in Holland)



WORKUM.

of brick—red brick, with stone sparingly used. There is no other Renaissance building in Friesland so fine. The stately stairs leading up to the entrance from the street are flanked by elaborately-designed lamps of a somewhat later style. Indeed, the stairs seem to be, as a whole, together with the lamp-standards and their plinths and the curious staircase balusters, a work of the rococo period. It is difficult to imagine these delicate lamps, designed so daintily, with their remarkable satyrs' heads, having withstood the buffetings of an open-air position so well in all those years of their existence.

Hoorn and Enkhuizen are decayed from a former greatness, but not recognisably so in any save that relative sense. If we desire really to visit a "dead city (or, rather, town) of the Zuider Zee," it is Hindeloopen we must visit. There it stands, behind the wooden palisaded dykes, defended by them in its shrunken, hoary decrepitude, reduced to the condition of a quiet village, and still fading away. There, however, is the great church; and there, too, is the Stadhuis, or Town Hall, with its little figure of a lion outside, clutching an armorial shield with the Hindeloopen arms—a deer, leaping—a pathetic relic of an old dignity. And at Workum, close by, a place not so far gone in decay, but just a sequestered village, you find a dignified square with an enormous church tower, and a weigh-house, and a Stadhuis bearing the arms of the "State of Workum." That phrase gives the key to the olden standing of these individualistic towns: scarcely less than that of all-sufficing little states.

It was not so very long ago, in the historic sense, that these places still kept a considerable trade. So much may be read in their architecture. In the quiet streets of Workum, as of Bolsward, there is a great deal dating from the middle and later years of the eighteenth century: the characteristic exuberant and rollicking design and decoration of the rococo and baroque sort, which gives you the humorous impression that the *koekjebakkers* (that is to say, the confectioners) of those periods, between 1660 and 1780, had turned architects, and had brought into their new profession the decorative sugar designs of their former trade.

Sneek, at the head of one of the principal navigations, on the Sneeker Mere, is a busy little town. Its name sounds unpleasant to the English ear, whether you pronounce it phonetically, or in the Dutch manner, "Snake." It still keeps one of the most picturesque of the many picturesque

and beautiful watergates in Holland; but the town itself is disappointing, largely because we soon, travelling in Holland, become accustomed to expect so much in the way of beauty and antiquity. There is a great deal of prosperity in Sneek, and there has been much rebuilding: building by men who wanted to be picturesque and striking and thought sheer uninstructed richness was sufficient. The modern elevations in the business streets of Sneek have



STAIRCASE TO THE STADHUIS, BOLSWARD.

all the rollicking Dutch licence without the old taste ; and they present an extraordinary exhibition of gables with windows that open only on to the sky, of pillars that support nothing, and decorative swags that seem to have been either the designs of children or the visions of nightmare.

In these vast level stretches of the northernmost part of the Netherlands this country of farms and black-and-white cattle, is an old Dutch country house I know. It lies between that seaport of Harlingen, of which your tourist to Holland, by way of the Hook, or other popular means of approach, has never heard ; and it is some fifteen miles from the sea, not so far from the town of Leeuwarden, which is the capital of Friesland. Actually that town is three miles distant, but in this region of flat country, with few intervening trees, and so clear and ambient a sky, you



WATER-POORT, SNEEK.

can see plainly its chief buildings. They are the great tower of its ancient church and the soaring spire of the modern Roman Catholic church.

Leeuwarden, this capital, numbers some forty-five thousand inhabitants. It is the centre of the cattle-marketing activities of the province, and these people think and talk about little else than those spotted Friesian kine. You read in Shakespeare "How a good yoke of bullocks at Stamford fair ?" Thus asks Justice Shallow at his house in Gloucestershire ; and the price of cattle in Leeuwarden is also in that place the beginning and the end of politics.

Guide-books—or, at any rate, one guide-book—would have us believe Leeuwarden to be a "dreary" town. That is not so : it is a lively town, and quaint and beautiful. And it is a town of colour, which you could not say, honestly, that such towns so well spoken of as Delft and Dordrecht possessed. They are grey and withered ; age-old and haggard. Now, Leeuwarden is at least as old, but the sap has not died out of it ; it is not sad, nor grey, nor withered.

I have, however, at present, nothing to do with towns, but with the country. I am seeing it, not as a tourist, living in hotels, but in a Dutch country-house, staying with friends who, although not English, speak my language with fluency. It is true that, like all foreigners, and even like the Scottish people, they are at odds with the words "shall" and "will" ; and direct my doings in that imperative tense, without in the least intending to command. "You *shall* go to Leeuwarden to-day" does not, therefore, mean the compulsion it seems to be ; and when we arrive there and go shopping, and a shopkeeper, intending to be polite and, at the same time, to air a few words of English, says heartily and with emphasis, "Good-bye, Sir !" he intends no insult, nor to convey the impression that your custom is not desired. He means a welcome "Good morning !"

But that is the way in Holland. People there like to

talk the English they can't speak, so to say. And you don't visit Holland just for the purpose of hearing grotesque English spoken.

This old moated country house, the home of landed families for so many centuries, is the last of its kind in this region. The other old families either are extinct, or landless now ; or, more likely yet, they are no longer content to reside, as did their forbears, in these extremely quiet and remote surroundings. They have, at any rate, disappeared, and this is the only "State" left. That term is the one used for "estate," with a slight difference in meaning. It indicates the house as much as it does the land that goes with it. Sometimes the word "slot" is employed, a variety of the German "schloss" for "castle," whether the house be like a castle or not, just as the French use indifferently the word "chateau" for castle or country villa.

There is no society here for the "adelgeboren Heer," the man of long descent and culture. Such as he must needs have resources within himself or be extremely lonely ; for he will not mix with the farmers, especially not now, because the farmers, who are all war-time, and post war-time, profiteers, and are now more wealthy than the old families, are not cultured ; only ostentatious, in their motor-cars and the showy but not tasteful conditions of their homes.

The house and estate have not changed hands since 1496. Always the place has passed by marriage of an heiress, and thus in the picture-gallery there still hang portraits of fifteenth-century owners of it, with those of the succeeding generations until now. The Dutch have ever loved their portraits painted. Some of those here are beautiful and dignified. There is one, a full-length of a little girl (Margaretha van Unia), hanging in Mijneer's study. I love her, although I do not know her history. An inscription on it says, "Aetat suae 7." She lived in the sixteenth century. The painter lavished much care on her dress : it was the way of those old Dutch artists. She wears a richly brocaded costume, with skirt down to her feet, like a little woman, and in her hand she holds a doll, as elaborately dressed and just as meticulously painted. The light falls tenderly on her, for this room is a typical Dutch interior, the windows tall and narrow, and curiously shuttered, so that the light



MARGARETHA VAN UNIA.

5, 1927

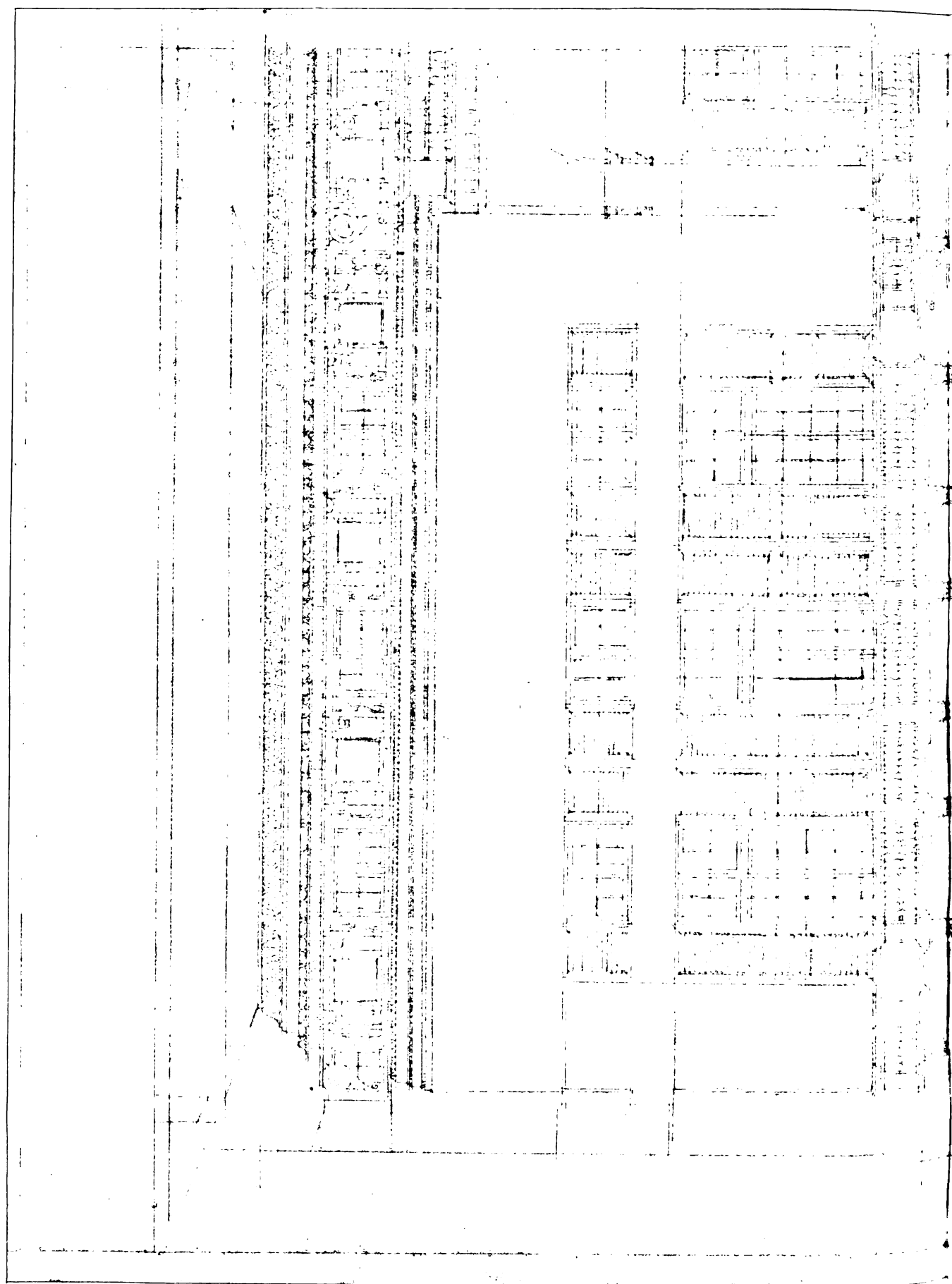
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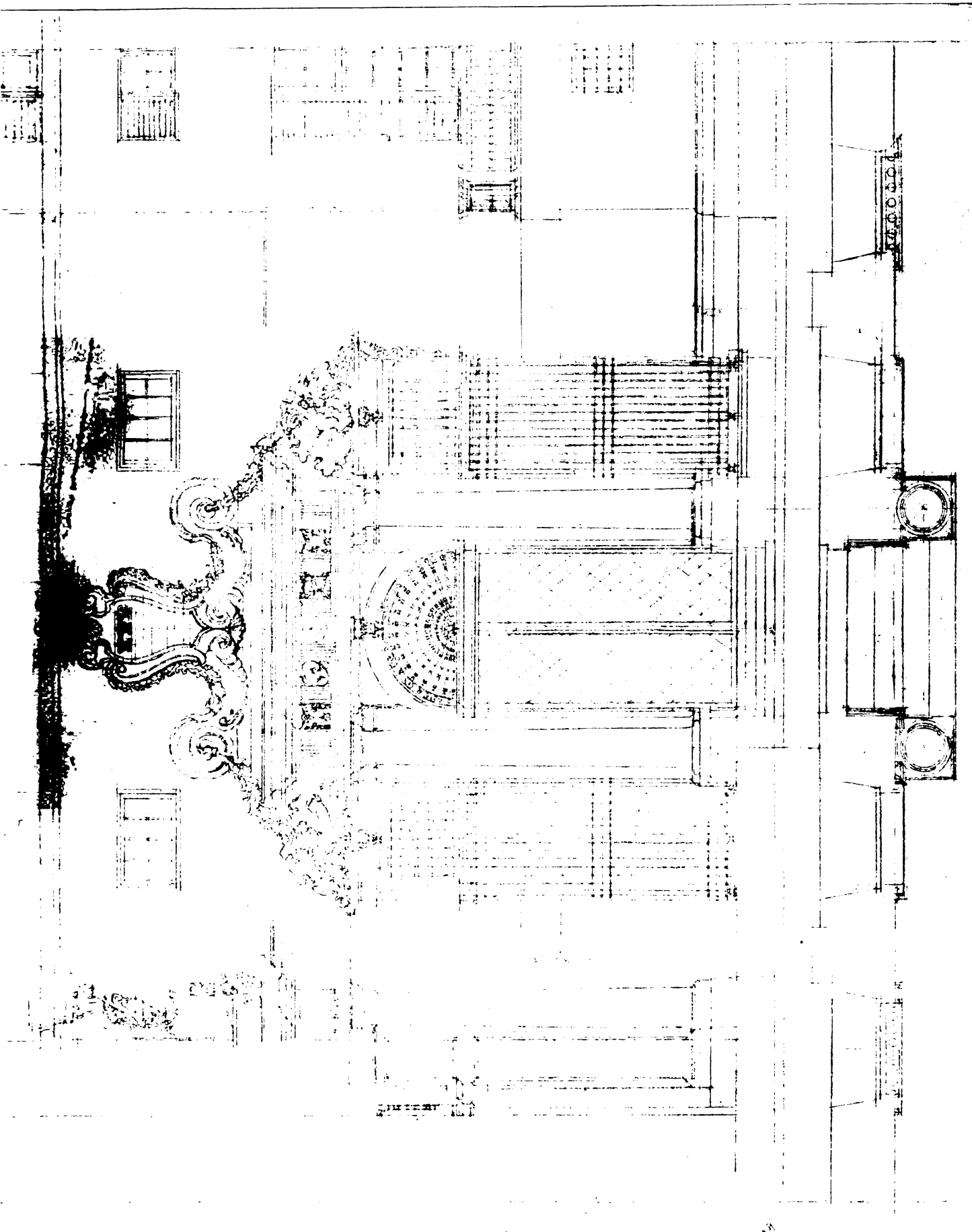
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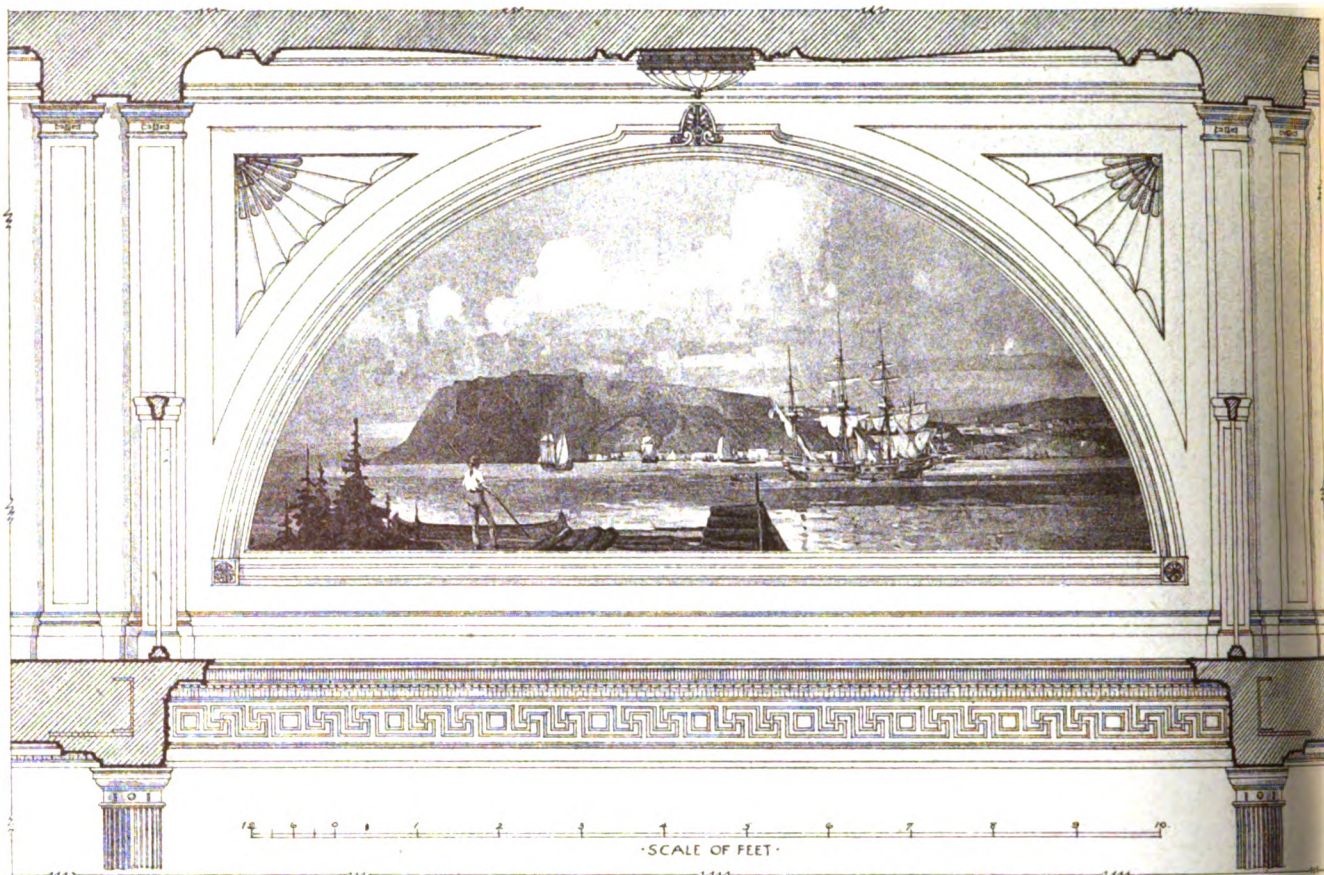
THE ARCHITECT, SEPTEMBER 15th, 1922.



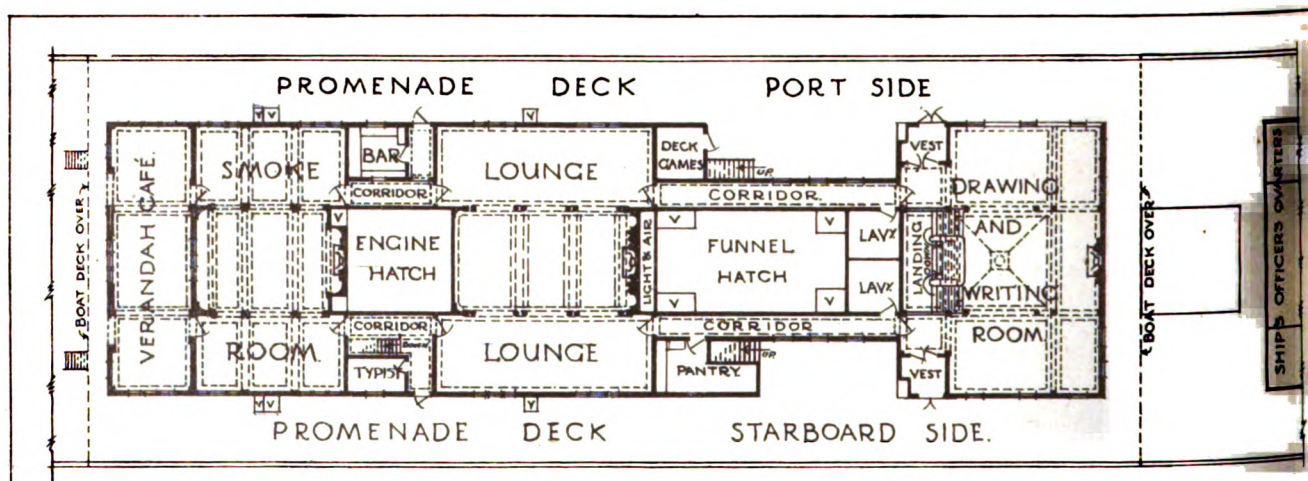


INK PHOTO. SPRAGUE HAYCOCK (PRINTERS) LTD 69 & 70 DEAN STREET, LONDON, W.1

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DECORATION OF DINING SALOON DOME



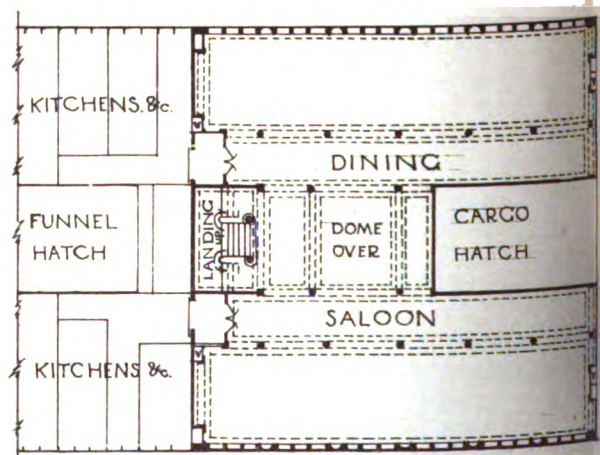
PLAN OF PUBLIC ROOMS ON 'A' DECK.

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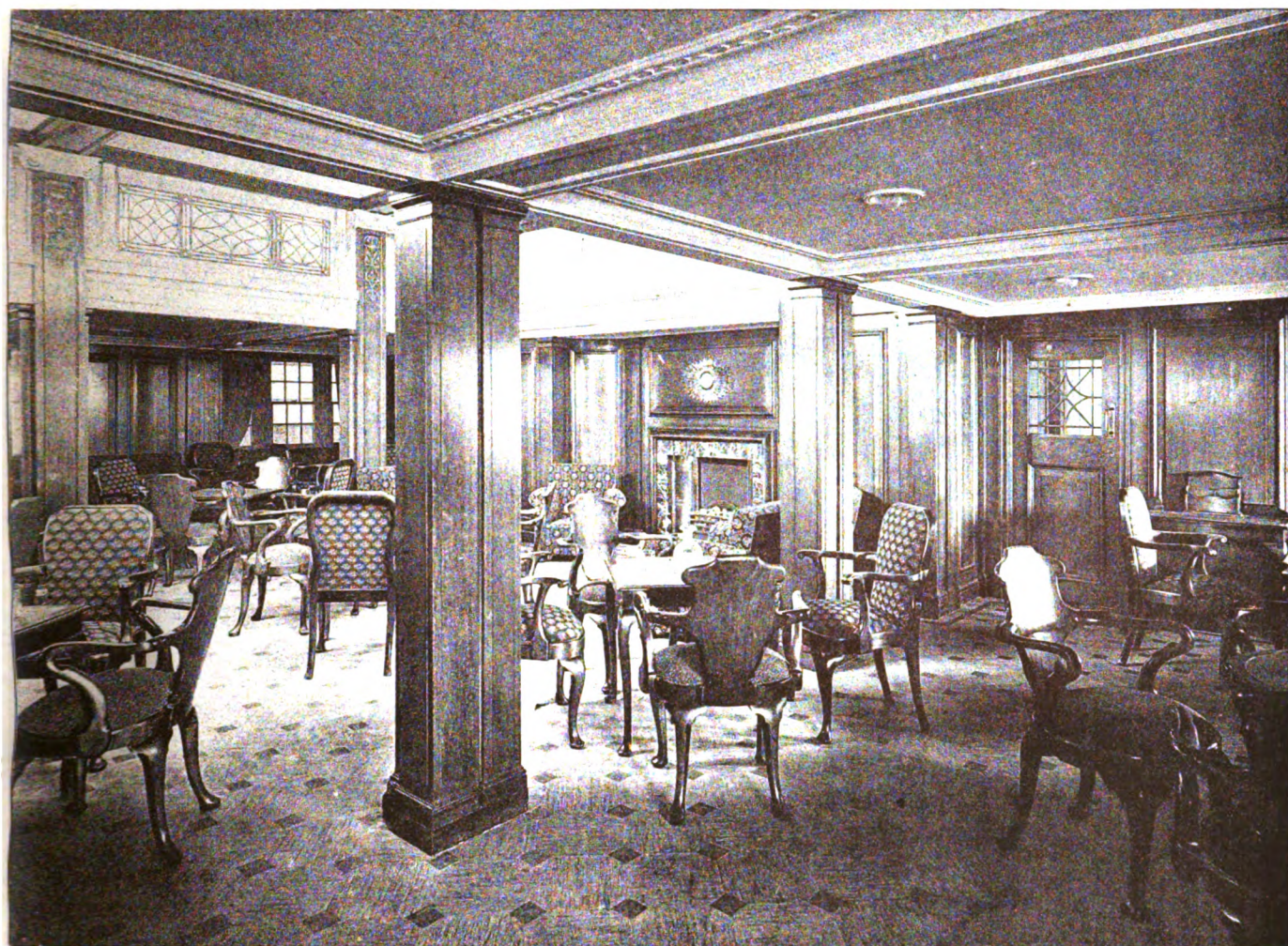
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CUNARD STEAMSHIP CO. LTD.

KEY PLAN OF PUBLIC ROOMS.

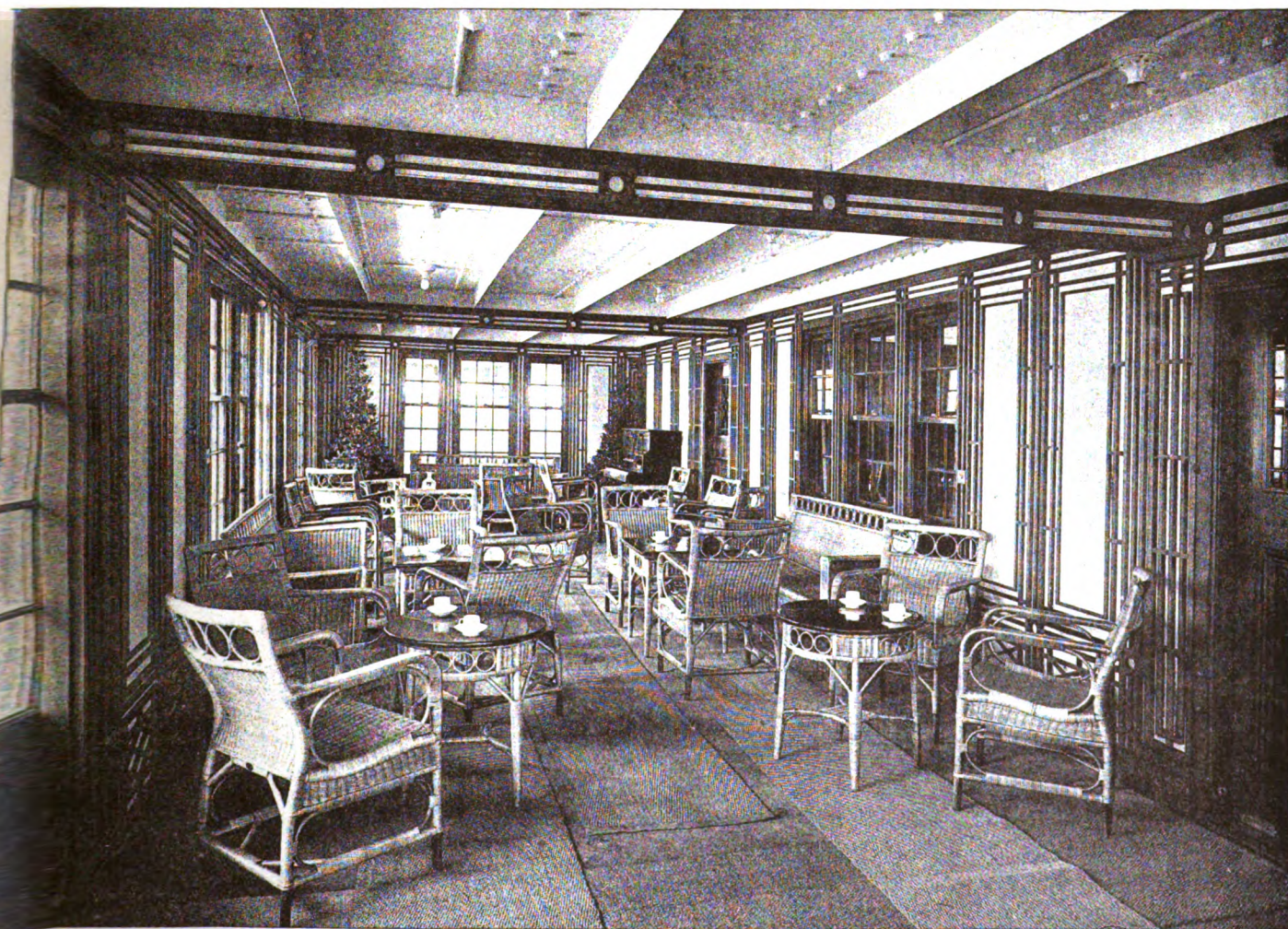
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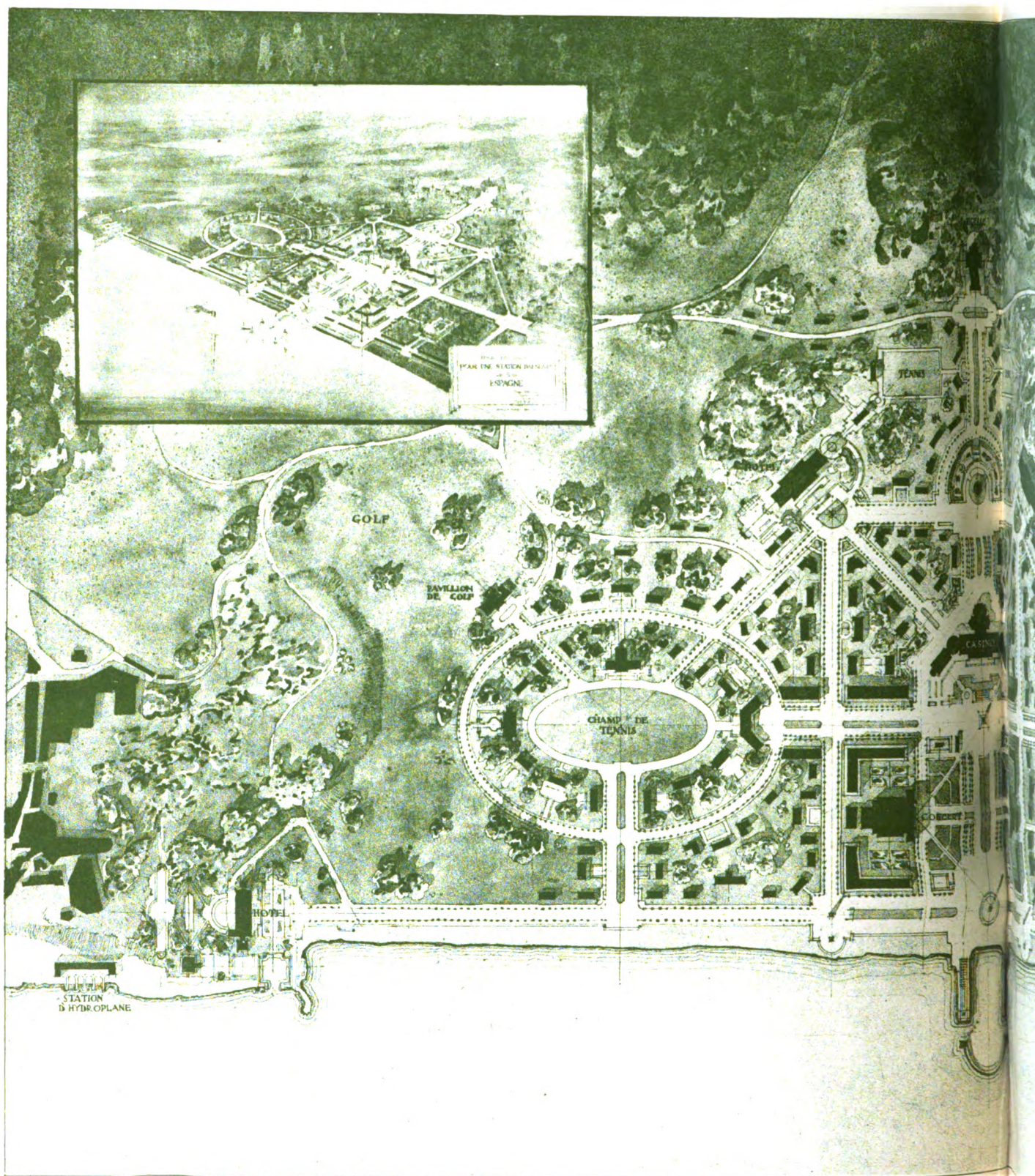
PLAN OF DINING SALOON ON "D" DECK



SMOKING ROOM.



VERANDAH CAFÉ.



PTEMBER 15th, 1922.



"INK PHOTO" SPRAGUE-HAYCOCK (PRINTERS) LTD. 69 & 70, DEAN STREET, LONDON, W.1

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comes slanting down into it, as you see in the interiors painted by such Dutch artists as Teniers, Vermeer, De Hoogh, and others.

There is much old blue-and-white china in this house, both Dutch and oriental, and there are many curious relics. In the attics, which are themselves like great rooms, light and dry, some long-forgotten object always rewards a search. Unfortunately for those who love the mediæval and later styles, on two occasions, in 1700 and 1800, Mijnheer's ancestors conceived the notion of bringing their old home up to date. At those times, and especially in 1800, anything old was held in contempt. Thus a good deal of the interior is remodelled in "Empire" style. Not wholly, because I gather that it was found too costly.

So not much remains of the fifteenth and sixteenth centuries. Just some brickwork at the back and some old

brick-paved roads are either small dykes or a navigable canal. The church, of dull red brick, with tall tower, completed with a saddle-back roof, is ancient, but scarcely interesting, and very grim and gaunt. It is almost exactly like every other village church in these parts, and it is built on a mound, ever so little raised above the general level; one of those "terps" which were formed by the prehistoric folk of these districts as sites for their original settlements, against the danger of being drowned out by sea or other floods. They are simply, in their origin, heaps of clay, dug from the surrounding flats. Most of these Friesian villages have names ending in "um": Jelsum, Marssum, Kollum, Dokkum, Workum, to infinity. The termination means "home." Even more marked are the Friesian personal names: ending invariably in "a." The changes rung upon Dekema, Sirtema, Troelstra, Postuma,



A DUTCH COUNTRY HOUSE: DEKEMA STATE.

carved stones in the cellar. What became of the materials from the older house? Buried somewhere, no doubt.

And thus most of what remains of those ancient people is their recorded mode of life. Rather a fierce and arrogant way they had. I have a note of how one lord of Dekema, feeling annoyed with the townsfolk of Leeuwarden, went out one morning, casually, as it were, with his retainers, and burnt a dozen or so of the houses there. Not, it seems, an exceptional incident. Just, no doubt, to show the Leeuwarden people who was who. But this arrogant raider was besieged by the angry burghers in return. I do not know what was the upshot of it all. But it shows how useful, nay, necessary, it was to have a good, broad and deep moat round the house. It is useful yet, for, like most moats in Holland and the canals, however dirty their water, washing the household linen is generally done in it; and it is surprising with what dazzling whiteness it emerges from that dubious water.

The moat is there yet, happily for sake of the picturesque. Fish live in it, and water lilies flourish, and wild ducks skim its surface. And a wooden bridge, with gateway locked at night, crosses it, in a spectacular manner, with little stone lions sitting up on their rumps and holding shields in their paws, with the family arms on them. Over the gateway you read the inscription, "Tankje God yn alles."

It is an L-shaped house, built, as are most buildings in Holland, of brick, with the usual pantile roofing, and the chimneys with muffles over them. These are surmounted by great gilded and pierced armorial vanes.

The village adjoining is small and scattered. Beside its

and hundreds of others are amazing. Alma Tadema, that anglicised Dutch painter and Royal Academician of some years ago; a social and artistic success, was a Frieslander, born of farming folk at Dronrijp, between Harlingen and Leeuwarden. A very charming decorative bronze tablet by George Frampton has been placed over the door of his birthplace in that village. But where is the great reputation of Alma Tadema to-day? Not, at any rate, where it was.

"The Architect" Fifty Years Ago.

SEPTEMBER 14, 1872.

STREET LIGHTING BY ELECTRICITY.

The authorities of Paris are determined, if possible, to let the light in on the dangerous quarters; with this object in view, a wooden structure has just been erected, about 11 feet high, on the south side of the Buttes Montmartre, and on this is to be placed an electric light, which it is hoped will illuminate the streets and wretched alleys of that quarter, and render surveillance more easy than it is at present. This is but an experiment, but should it succeed, similar lights will be set up in all the dangerous—or, as they are called in Paris phraseology, *executric*—quarters of the city. Similar experiments have been tried over and over again, and always with the same result, namely, that the streets on which the light falls directly are in an intolerable glare, while all the rest are thrown into intense shadow. We see no chance of any different result being arrived at. There are certain outlying, and some very ill-reputed places, not only around Paris, but other capitals and cities, where electric lights of the kind would be extremely useful, if they were not found too costly for adoption.

Difficulties arising out of the Change of Policy in Housing.*

In rural districts, from time immemorial, housing accommodation for the farm labourer has never been provided upon an economic basis—that is to say, the rent paid has never been in real proportion to the cost of the house and the annual expense of annual upkeep and outgoings.

This has not applied to the same extent in urban areas, but for many years past, in consequence of the standard required for sanitary reasons, the ownership of this class of property has not been an attractive form of investment; frequently the whole of the rent of a house for a year has had to be expended, say, in providing new drainage, and, taking this liability into consideration, one frequently hears from owners of small property who do make an effort to keep their property in a good state of repair that there is very little left on the credit side of the balance sheet.

Local authorities have rightly insisted upon a much higher standard of repair and maintenance than formerly, with the result that the ordinary investor has preferred to put his money into stocks and shares rather than into bricks and mortar, and this tendency has increased considerably during the last ten years owing to the high rate of interest which can be secured in sound investments.

The legislation introduced in 1910 in connection with the duties on land values had a most detrimental effect upon investment in land, perhaps more theoretical than actual, but nevertheless added considerably to the difficulties of the provision of small houses.

At the close of the war the very serious shortage of houses was such as to need drastic remedies, and hence the policy of Parliament outlined in the Housing Act of 1919.

Local authorities and their officials as a whole threw all their energies into carrying out this policy, and with a great measure of success, because, whatever may be said by the uninformed, there are scattered all over the country thousands of houses certainly of a better type and laid out on lines far superior to the old rows of miserable streets all of the same kind such as we were accustomed to in the last century.

Some 176,000 houses have been erected or are in course of erection under Assisted Housing Schemes carried out by local authorities under the Act of 1919, and the question arises: What of the future?

On May 24 last the Minister of Health was asked "Whether it was now the settled policy of the Government to refuse all further financial assistance to local authorities who desired to provide houses in excess of the 176,000 already promised under the Housing Act of 1919, and, if not, how much lower had building costs to fall before the Government would sanction further building operations under the Housing Act of 1919?" He was also asked on the same day "Whether, in view of the fact that the costs of building were now down so low that contracts were being accepted for building houses as low as between £300 and £400 per house, and also the fact that the number of building trade operatives out of work was rapidly increasing, he would now sanction further schemes for building the much-needed houses, and thus ensure that no less number of houses would be built because the Government called a halt last year." The Minister replied:

"Local authorities have been guaranteed excessive loss at a heavy cost to the taxpayer during the whole period of high prices, and I think that where they consider it desirable to undertake further building they may not unreasonably be asked to do so on their own responsibility. It is not proposed to make any departure from the policy which I announced last session as to the limitation of the number of houses to be built under the State assisted scheme."

He was further asked: "Is the right hon. gentleman aware that the local authorities are very anxious to know what is the settled policy of the Government, and would he be good enough to reply to the first part of the question as to whether the Government are going to sanction no further houses beyond the 176,000 under the Act of 1919." The Minister replied: "I have repeatedly stated the Government policy is not to sanction any further new houses under the present scheme of State assistance."

The Government seem to vacillate from week to week in regard to their policy. Speaking earlier (on March 13), the Minister of Health said:—

"We have still a large programme to carry out. It is a programme which, if we are to carry it out within a year, would require us to complete more houses than was customary in the industry in pre-war times. We are going on with the programme. As to the Government policy in the future, I am not in a position to say anything. We have commenced 150,000 houses. On March 1 1919, were completed. The number of houses authorised but not yet started is 20,000, and nearly 5,000 are not yet allocated. Altogether local authorities and private builders have completed 110,000 houses. We have still to build 59,000 local authority houses and 14,500 private builders' houses.

It would be foolish for me to announce some policy which in six months or twelve months' time would prove to be quite a wrong policy. I do not wish the Committee to imagine that I regard housing conditions as satisfactory or that I think we have solved the housing problem. We have not done so, but I maintain that we have made a very large and important contribution towards solution with 226,000 houses. It is not fair to say that no pledge has been kept and nothing has been done. We may not have done as much as many had hoped and wished, but we have done as much as anyone anticipated."

The situation is rendered still more confusing by the fact that the last time the Prime Minister spoke on housing in the House of Commons he gave a clear pledge that the policy of the Government was one of halt and resumption. He said (July, 1921):—

"We are only now crying a halt—not to stop building. There will not be a single house the less built. On the contrary, there will be more houses built . . . because we know that by pulling up now, by liquidating this gigantic obligation we have got upon us of 176,000 houses, and then, by meeting the building trade on equal terms, there will be more houses, cheaper . . . I say this is simply an effort—and I use the phrase which I have used before—not to stop house building, but to put it on a better and more businesslike footing."

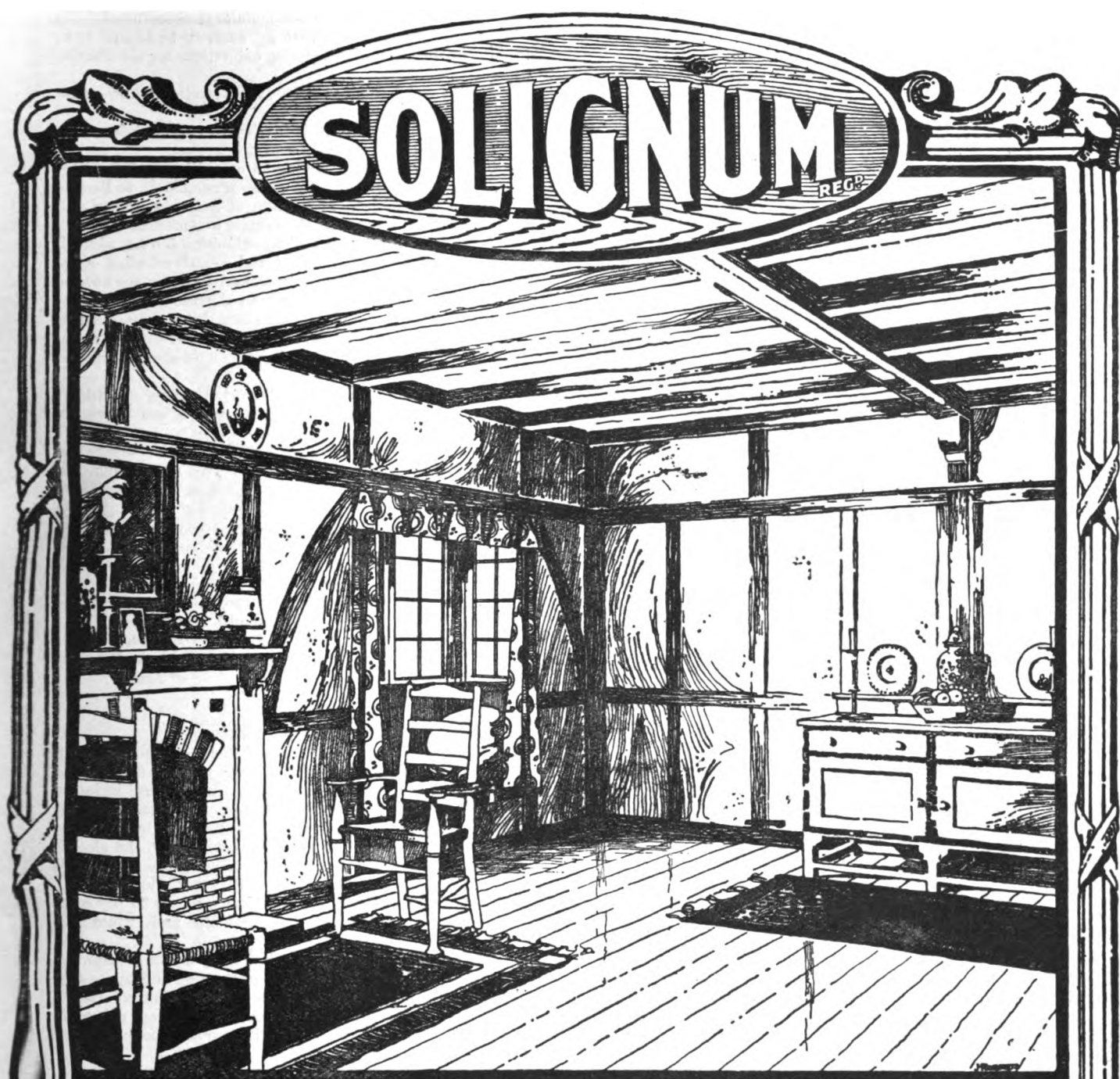
When a Government is uncertain (as is the case with the present Government) concerning the policy which it should adopt, there is special need for such Congresses as this, expressing their views with no uncertain voice in favour of the steadfast pursuance of a great housing policy.

So long as the people are dwelling in old, airless and dilapidated houses all efforts at improving the conditions of health are more or less thrown away.

The first question to face, then, is how far it is possible, having due regard to the interests of the ratepayers, for a local authority to now undertake housing schemes without assistance from the State. The following statement of the annual income and expenditure in connection with a house consisting of living-room, scullery parlour and three bedrooms will give some idea of the liability of the local authority:—

| COST OF HOUSE, INCLUDING COST OF LAND, ROADS AND SEWERS, SAY £500. | | | |
|---|--|--|----------------|
| Income. | | | £ s. d. |
| Rent at 10s. per week, excluding rates, taxes and water charges | | | 26 0 0 |
| Balance against local authority | | | 6 17 3 |
| | | | <hr/> £32 17 3 |

* Abstract of a paper by Mr. Edmund R. Abbott, Clerk and Solicitor of the Ruislip-Northwood Urban District Council, read at the Bournemouth Congress of the Royal Sanitary Institute.



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| <i>Expenditure.</i> | £ | s. | d. |
|---|-----|----|----|
| Repayment of principal and interest of loan at £5 per cent. | 26 | 7 | 3 |
| Allowance for repairs, 15 per cent. | 3 | 18 | 0 |
| Ditto empties and cost of collection, 10 per cent. | 2 | 12 | 0 |
| | £32 | 17 | 3 |

If the inclusive cost of house were £400, the loss would be only £1 11s. 10d. per annum, and if the money could be borrowed at £4 per cent. instead of £5 per cent., there would be a balance in favour of the local authority of £1 17s. 2d.

It must, however, be remembered that it would not be possible to obtain a rent of 10s. per week, exclusive of rates, taxes and water charges, in a large number of districts.

The following issues arise :—

(a) Must not housing be looked at to some extent from the national point of view in the same way as other aspects of health—e.g., tuberculosis, maternity and child welfare work, and prevention and cure of venereal disease, and should not the Government therefore be responsible for part of the expenditure?

(b) Are local authorities to provide houses for those people who do not reside in their district? It seems hardly fair that they should have to do so, but frequently the districts which can least afford to do so are those where housing conditions are worst, and the districts perhaps where land is cheap and readily available have the least need of houses.

Several methods of Government assistance occur to one :

(a) Lending money to local authorities at a low rate of interest or free of interest for a term of years.

(b) A grant in aid of the loss which would be incurred by local authorities, either on the basis of a capital grant for each house built or an annual grant per house.

(c) In order to meet the question of the building of houses for non-residents, an additional grant if the local authority would undertake to build a certain proportion of houses for this class of tenant. I know that I shall be met with the alternative of private enterprise, but, with the above facts before us, can we expect private builders to really enter the field? Why should they when they can build a villa for £800 and let it to a tenant from £50 to £60 per annum, freeing the landlord of rates, taxes and repairs, or when they can sell and make an immediate profit.

Of course, something depends on the action of Parliament next year, when the Rent and Mortgage Restrictions Act comes to an end. If it is renewed in its present form matters will remain much as they are at present. If it is not renewed, one hardly dare think of the consequences to tenants of small property who are not in a position to buy their houses; and, again, if local authorities were foolish enough to adopt the policy of the Committee on National Economy known as the Geddes Committee, and sell the houses which they have already built, the position would be ten thousand times worse.

To sum up :—

(a) Houses must be built to provide homes for those who are living in overcrowded conditions.

(b) Houses must be built to replace slums, which must be demolished.

(c) This is a national question as well as a local one, and national funds should bear part of the cost.

(d) It is quite useless to look to the private builder to fill up the gaps.

(e) A good standard of house and lay-out of site must be maintained.

At the invitation of Sir Frank Baines, of H.M. Office of Works, the Art Standing Committee of the R.I.B.A. have arranged a visit to Westminster Hall to inspect the famous roof on Saturday, October 14, 1922, at 3 p.m. The work on the roof is now completed; the scaffolding will be removed shortly and an opportunity for examining the work is not likely to occur again for many years. Members and their friends who wish to take part in this visit should apply to the Secretary R.I.B.A., by whom tickets will be supplied.

Correspondence.

Exhibitions Organised by the Faculty of Arts.

To the Editor of THE ARCHITECT.

SIR,—In your issue of September 8, under the heading of "The World of Art," you mention that I "seem to be taking some steps" in the direction of circulating exhibitions for the Faculty of Arts.

This is true, and I think you may be interested to know what I have already fixed up :—

The Commercial Art Group is invited to exhibit (after their show at Willing's) in Paris in February.

The Photocraft Group is sending an exhibition to 500 village clubs, after which it will send this show, or one like it, to Paris in February. The American Federation of Arts has invited this exhibition to travel around its 280 centres in America.

Miss Nancy Smith has prepared an exhibition for me, which is likewise going to 500 village clubs; and a small selection of the posters she has done for the Underground Railway are now on show in Paris, where they have been praised in the leading papers.

We are opening this month at the Little Art Rooms, Adelphi (thanks to the generosity of Mr. Furst, one of our Council members), a show by the Illustrators' Section of the *Fédération Française des Artistes*.

In May we have fixed up an important show of British Etchers, in Paris, which may later go on tour of our provincial centres and the U.S.A. and Canada.

We are bringing over the work of a great Spanish sculptor and of a new Basque artist from our centres. We are holding one-man shows in our Bloomsbury Centre and at our new Gower Street offices, any of which may go on tour if good enough.

Our watercolour group is getting a show ready for circulation. And I have suggested to our architectural advisor that we shall prepare an exhibition of "*Sculpture suitable for architectural use*" which could also go on tour.

All this I am able to arrange, and more, without any expense to the artist, and the Society only takes 10 per cent. on sales.—Yours faithfully,

AMELIE DEFRIES,

Organiser of Exhibitions, Faculty of Arts.

Castelnau House, Barnes, S.W.

September 12.

Back to Pre-war Prices.

An encouraging sign for the householder in these days of high gas bills and controversy over the therm method of charging for gas now in operation is furnished by the electrical industry in which the tendency is towards a reduction in prices. Ample proof of this is given by the very substantial drop in the prices of Osram Lamps announced in our columns to-day, the electric lamp thereby achieving the distinction of being the first article of public utility to fall below the pre-war level of prices.

The price reductions vary from 12½ per cent. to 30 per cent. for the various sizes of Osram vacuum lamps and Osram gas-filled lamps.

This remarkable result has been achieved by means of improvements in machinery and methods of construction and by greatly increased manufacturing facilities at the specialised Osram G.E.C. factory at Hammersmith, coupled with an enhanced demand for electric lamps due to the growing popularity of electricity as an illuminant.

An Automatic Disinfecter.

There has been in the past more than one attempt to combine the flushing with the simultaneous disinfection of water closets. Owing to one reason or another they each proved impractical. For ordinary domestic purposes there should be rarely any need for such a contrivance. But the case is different when one comes to closets, lavatories and urinals in public places. The difficulty which has hitherto remained unsolved appears to us to have been met by Relf's "Preventas" Disinfecter. This consists of a porcelain container of 3 pints capacity which is easily bracketed above the flush tank and which discharges disinfectant into it by means of a small outlet pipe. The latter is opened and closed by the ball arm which, being suspended in the flush tank, rises each time the tank flushes and fills again, so releasing a given quantity of disinfectant. The flow of disinfectant can be regulated to a nicety. The container is filled by hand with water into which is poured one ounce of disinfectant—Jeyes' Fluid being recommended. This should be sufficient for anything between forty and seventy flushes, according to the tank. A small float indicates on the exterior of the container the amount of disinfectant it still holds. Should any signs of clogging appear the trouble can be remedied by flushing the container's outlet pipe with hot water or removing the obstruction with a pin. The "Preventas" is cheap, simple in construction and effective. Messrs. R. Thornton and Co., 340, Kennington Road, S.E.11, are the sole agents.



AUSTRALIA HOUSE.
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Architects.

From an original Etching by
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Office: 19 Waterloo St

BIRMINGHAM
Office:
47 Temple Row.

NEWCASTLE-ON-TYNE
Office:
Milburn House.

REGISTERED OFFICES: 2 St. Andrew Square, EDINBURGH.

New Catalogues.

W. T. Henley's Telegraph Works Co., Ltd., Blomfield Street, E.C.2, devote most of their Booklet No. 257 to photographs which demonstrate most interestingly the wide variety of buildings in which the Henley wiring system has been installed since its introduction just over ten years ago. They range from Government housing schemes at Bradford, Swindon, Croydon, etc., to the Mogul Sheah Mosque at Rangoon, the Commonwealth Bank of Australia at Sydney and Witley Court, Worcestershire. The company claim that their system is suitable for every type and has advantages for them all. Certainly this collection of samples is a most convincing argument, should anyone need convincing. For more general distribution, Messrs. Henley have divided up the pages under groups of type of buildings and have reprinted them in five booklets.

The London Electric Wire Company and Smiths, Ltd., Playhouse Yard, Golden Lane, E.C.1, have just issued a new edition of their useful Wire Tables, which give a great deal of technical information in a most compact form. The first table deals with the British standard sizes of annealed copper wires, and gives the superseded S.W.G. size, standard diameter and calculated sectional area in inches and millimetres, weight per 1,000 yards in pounds, standard resistance at 60° F., and current rating in amperes. This table, like that showing British standards for solid and stranded circular conductors, has been extracted by permission from reports of the British Engineering Standards Association. Other tables include physical constants, Nickel Chrome and Eureka resistance wires, diameters of fuse wires, logarithms and antilogarithms. The company are prepared to send a copy of these tables to any firm.

From Charles Lathe & Co., Ltd., Moat Foundry, Tipton, who have been in existence just fifty years, comes a copiously illustrated price list containing a selection of their manufactures as particularly demanded in housing schemes. The prices are kept as low as possible consistent with best quality of material and workmanship. "Claco" goods include ranges, oven grates, combination grates, tile and mantel registers, interiors, portable boilers and slow combustion stoves. We have also received special lists for their steel cottage windows, casements and sashes, sections of sash bars, the new model "City" range, and "Claco" wringers and mangles.

The Brentford Gas Company, of High Street, Brentford, Middlesex, have prepared a leaflet entitled "A Better Way," explanatory of their claims for their road dressing. A portion of the roadway outside the works of Messrs. Thornycroft & Co., at Basingstoke, has been done with this system, under the supervision of Mr. J. W. Drew, the Borough Engineer. The material is known as B.B.T.C.—Brentford Bituminous Tar Compound.

On a single sheet, Mr. John Whitehead, 401 Grey Mare Lane, Manchester, succinctly sets forth the points of his "Easyclean" sash window as patented in this country and also in France, Belgium, America and Canada. It is a combination of sliding and tilting sashes which enables the glass to be cleaned from inside the room. Any existing window can be converted into a Whitehead window. Both sashes have a central and balanced hang free from friction of the cords and can be taken out of the frame without disturbing the beads by merely unscrewing a small attachment, top and bottom. Ventilation is regulated as in the ordinary sash window, or if both sashes are tilted inwards a still greater inflow can be obtained. The "Easy-clean" is described as absolutely weatherproof and no more costly than the usual type with all its attendant risks.

Marseilles Roofing tiles, made of non-ferreous clay found only at Marseilles, are already known in this country. From Langley London (161 Borough High Street, S.E.) we have received a short booklet descriptive of this covering, of which they are the sole selling agents. It is claimed that though showing a substantial saving over slates or flat tiles they are both beautiful and remarkably durable. The economy is not only in first cost but also in laying.

The National Radiator Co., Ltd., Hull, and 439-441, Oxford Street, London, W., have prepared leaflets giving particulars of various additions to their line of "Ideal" accessories. The "Ideal" Damper Regulators are an improvement upon the "Sylphon" hitherto listed by them. The flexible brass bellows in these is surrounded by highly sensitive chemicals giving the necessary thermostatic control. Two sizes are available for water boilers, the smaller being specially designed for use on the "Ideal" Domestic, "Classic" and small "Premier" Boilers. The damper regulator for steam boilers has also been re-designed and the new pattern can be supplied with the weights suitable either for a maximum of 4 lb. or 15 lb. The new "Ideal" Tank Regulator is especially valuable in connection with industrial processes and the maintenance of definite temperatures of

liquids. The company have also designed a galvanized fuel bin which provides convenient storage for fuel in the vicinity of a heating or hot water supply boiler. The "Ideal" Concealed Regulating Valve gives a neat appearance to the radiator in which it is fixed. The Easy-Clean Valve and Union Elbow illustrated on page 91B reduce to a minimum the surfaces on which dirt or dust can collect and being smooth, they can be readily cleaned.

General.

A cinema is to be erected at Frodsham; the architects are Messrs. Wright & Hamlyn, Sankey Street, Warrington.

A large portion of a Roman wall and a bastion have been exposed during recent excavations in Aldersgate Street, E.C.

The Halifax branch of the Christian Science Society are contemplating the erection of a new church on land near to Park House.

Preston Town Council on the 11th inst. accepted the tender of an English electric company of £94,900 for the erection of a new generating station.

The Sheffield City Council propose to enlarge the Shiregreen Council School situated at Bracken Road in the City of Sheffield, by providing additional accommodation for about 240 children.

The Braichgoch Slate Quarry, Corris, Merioneth, after a stoppage of nearly four months owing to a dispute regarding wages, was re-opened on the 11th inst. The quarrymen and miners' wages have been reduced.

The General Purposes Committee of the Darlaston Urban District Council recommend the acceptance of the tender of the Unit Construction Co. for £31,743 in connection with the No. 1 contract for the sewerage and sewage disposal works.

The Manchester Local Education Authority propose to build beside the existing premises an extension of the St. Wilfrid's Rutland Street, Hulme, Public Elementary School, providing additional accommodation for 109 girls and 129 infants.

A public meeting is to be held in Lincoln with the object of appointing General and Executive Committees, which shall promote an appeal for a sum of £50,000 for the purpose of building new churches at Ashby and Crosby, and building a church at Brumby and a church house at Scunthorpe.

Plans were submitted and passed on the 7th inst. at a sitting of Glasgow Dean of Guild Court for several big housing schemes. Among the linings granted were:—Glasgow Corporation Housing Department: To erect dwelling-houses, shops, etc., at Factory Street, Pleasance Street, M'Arthur Street, and M'Dougall Street. William Cook, joiner, Pollokshaws Road: To erect four houses of five apartments at St. Ronan's Drive, Shawlands. The Rev. Donald M'Intosh, Roman Catholic Archbishop of Glasgow: To erect a two-storied school at Nimmo Drive, Govan, to cost approximately £13,000. Glasgow Public Utility Society, Ltd., 203 West George Street: To erect eighteen blocks of four and five apartment dwelling-houses at Glasserton Road and Merrylee Road, Cathcart. The estimated cost is about £22,000.

Mr. Hope Bagenal, A.R.I.B.A., the librarian of the Architectural Association, and an authority on acoustics, has shown his interest in the Leeds Art Theatre movement by visiting Leeds last week-end at the invitation of the promoters to inspect the Albert Hall, where the performances are to be given. The suggestions he made will be carried out by the Art Theatre management.

The death occurred at his residence at Scotby, near Carlisle, last week, of Mr. H. Higginson, Licentiate R.I.B.A., a well-known architect in the city. The deceased, who was 60 years of age, had suffered from indifferent health for some time. He came to Carlisle as a young man in 1882, from Preston, as architectural assistant, and afterwards commenced business on his own account and built up an extensive practice.

The mutilated body of Mr. John Alexander Macpherson, of Messrs. P. and W. Anderson, Ltd., contractors, of Glasgow and London, was found on the railway line at Brookwood, near Woking, on Saturday night. Mr. Macpherson had been inspecting some light railway works in Devonshire. It is supposed that he fell out of his compartment in the belief that he was stepping into the corridor, and was killed by the down mail. Mr. Macpherson recently became a director of Messrs. P. & W. Anderson, Ltd.

Sir George Renwick, Bart, M.P., has informed the Newcastle City Council that it was the intention of his wife and himself to present to the city a bronze monument by Sir Goscombe John, R.A., to commemorate three events:—(1) The raising of the Commercial Battalions of the Northumberland Fusiliers by the Chamber of Commerce Military Committee. (2) The return of their five sons from the war. (3) Sir George's attainment in 1916 of 50 years' commercial life on Newcastle Quayside. The Corporation have appointed a committee to discuss the question of providing a site.

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English Sculpture in the Seventeenth and Eighteenth Centuries.

In the series of articles upon this neglected aspect of English art which we have been publishing during the past year something of a wood may, we hope, have emerged from the crowding trees of the catalogues which have necessarily formed the bulk of our material. We have seen the post-Restoration sculptors Cibber, Pierce, Gibbons and Bushnell carrying on the traditions of stone, and being equally ready to act as master-mason, decorative sculptor or monumental artist; we have followed Scheemaker and Rysbrack from their apprenticeships to their appearance as the recognised masters of their time; we have watched Roubiliac, genius and gentleman, from his obscure beginnings to his death in the height of his powers; we have noted Bacon carrying on the traditions of the past, if injured at times by the allegories of the present; we have lamented the neo-Hellenism of the accomplished Banks, that rock on which European sculpture was for two generations to founder, and have seen it with the more regret for the masterpieces into which he now and again deviated.

Minor men, too, have not been overlooked. We have met the stubborn and argumentative Carpentier; the posing Italian, Guelfi, who might have figured in the levée scene of the "Rake's Progress"; the conscientious lead-worker, Van Ost the elder; and the indolent Carlini, with his background of quack medicine and his masterly craftsmanship when, which was not often, he chose to work at all.

One thing is clear: the sculptor's art during our period was more conspicuous than it has been in England before or since. The intensifying of the national consciousness by great foreign wars; the unique opportunity offered by the Fire of London and the master-eye of Wren for the right man to assist him; the quickened interest in the literary legacy of the past; the enthusiasm for contemporary idols such as Cowley and Congreve; all these things combined to fill our town halls and public buildings with statues of the sovereign, and to concentrate attention on Westminster Abbey as the natural resting-place of our national heroes, whether arms or the pen had been their calling. A settled England made for settled homes; for the expansion of country houses and their decoration with statues, modern or restored; for the adornment of churches with monuments in ever-increasing numbers. Prosperity and trade expansion led to the erection of new public buildings with their appropriate figures; the spread of taste to the adornment of the citizen's house with marble mantelpieces; of his suburban garden with sculpture once confined to the nobleman's seat; and so to the increase of those sculptors' yards in which so many of the great artists of the eighteenth century began their career. Royal patronage also—and this is a point often overlooked by historians of the age—gave the sculptor a position only previously attained, and that for a brief period, by the Le Sueurs and Fanellis who worked for Charles I, and the visits of Queen Caroline to Rysbrack's studio, the conversations of George III with Nollekens and Bacon, must have reacted to an unsuspected degree upon the fashionable world.

The eighteenth century was, as we are constantly

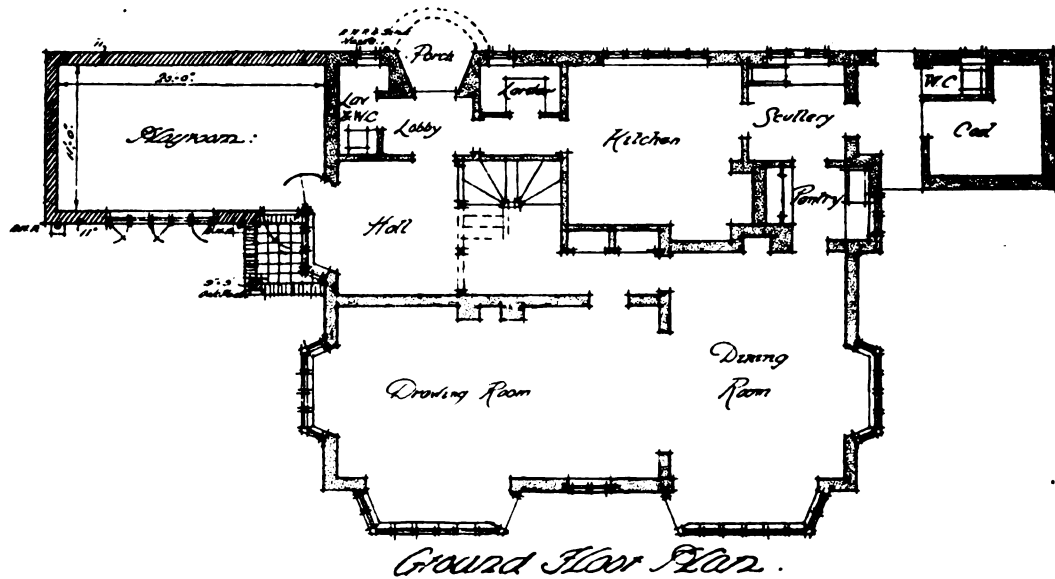
reminded, an age of patronage; but it was also, and supremely, the age of the literary dictator. What Kneller in the field of portrait art owed to Dryden's praise we know; what Scheemaker and Roubiliac owed to Pope has been less insisted on, but the former, as Vertue tells us, got all the business after his Shakespeare, erected under Pope's auspices, was set up in the Abbey, and the latter owed more commissions to his bust of Pope than to any other portrait that he executed; and the news that Dr. Johnson has sat to Nollekens must have gained the sculptor a wider clientèle than any other of his early portraits.

We have seen something, too, of the influence of foreign studies upon English sculptors. Bernini affects the sober mind of Pierce as strongly as the unbridled imagination of John Bushnell; Bird carries the faint shadow of the same tradition into his work on St. Paul's; Scheemaker and Delvaux, Flemings by birth, copy the antique with zeal, and qualify by years of hard work in Rome for their future greatness here. Wilton, after a term in Flanders with Delvaux, goes to work under Pigalle; Roubiliac is trained under Coustou; the centre of gravity has shifted to Paris for the moment. But with the foundation of the Royal Academy Rome again becomes the Promised Land, and students flock thither to complete their studies, and, alas! to succumb, like Banks, to the tide of neo-classicism from which Nollekens was saved by his pre-Winkelmann visit, and Bacon by never studying abroad at all.

And with all this we have been behind the scenes. We have met in private life the admirable Rysbrack, kind, thoughtful and industrious; we have seen Roubiliac in his genial moments; we have commiserated Francis Bird for his accident on a frosty night in the ill-lit London streets; we have laughed at Signor Guelfi's airs of patronage, and wandered with Vertue over the neglected house in Tyburn Lane which sheltered the wrecks and relics of poor Bushnell's art. And if something of the catalogue nature has made our pages heavy, we can remember that, as bricks are not made without straw, so artists cannot be judged without a knowledge of their works. And common gratitude will not permit us to take leave of our subject without a tribute to the pious labours of George Vertue, F.S.A., whose love of art led him to note down so much that without him would have perished utterly, and whose work, presented in part by Horace Walpole, another servant of knowledge for its own sake, is here for the first time systematically used to illustrate our subject. Without the help of his unpublished matter, so much of which was closed to the honourable reticence of Horace Walpole, we could never have known the secret history of the sculptors and the sculpture of his age. We may well apply to his writing what Walpole said of his engravings: "Truth was his province, and he had a felicity uncommon to antiquaries—he never suffered his imagination to lend him eyes. Where he could not discover he never supplied." Who, after such a tribute, will grudge him his resting-place in the cloisters of that Abbey whose monuments he chronicled with such unflinching care?

Our Illustrations.

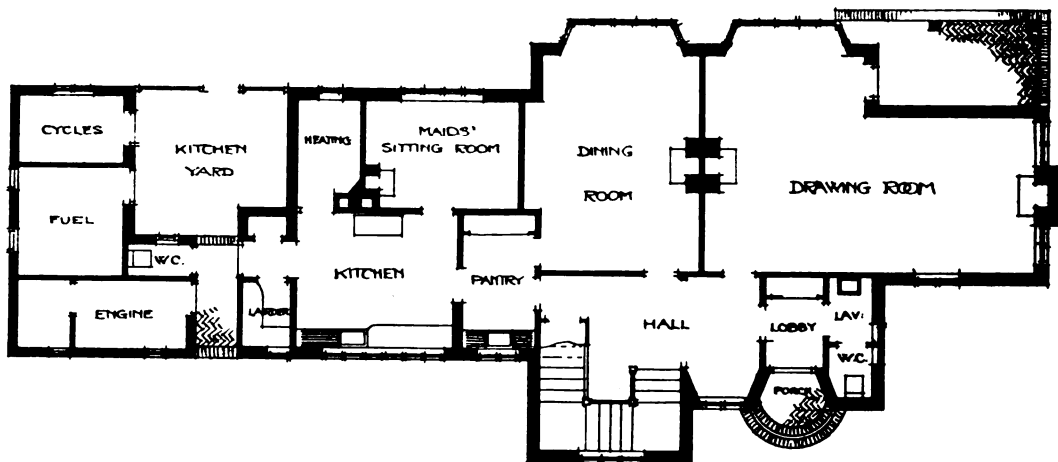
NEW CHURCH OF ALL SAINTS, BEDDINGTON, SURREY. H. P. BURKE DOWNING, F.S.A., Architect.



HOUSE, BURGH HEATH, SURREY. L. STANLEY CROSBIE, Architect.

This house was erected in 1914, and the small wing (shown with hatched lines on plan) was a recent addition. Brown stocks were used for the facings, with red plinth and dressings,

and the roofs are covered with red hand-made tiles. Mr. C. W. Kinge, of Walton-on-the-Hill, was the contractor.



HOUSE, KINGSWOOD, SURREY. L. STANLEY CROSBIE, Architect.

This house, which has just been completed by Messrs. F. M. Thompson & Sons, of 14 Victoria Street, S.W., was arranged on a long-spreading plan in order to take the most advantage of the site and the aspect.

The sub-contractors were: Electric lighting plant and wiring, Messrs. Tyler & Freeman, of 40 Chancery Lane; plumbing,

Messrs. Jennings, of Lambeth; roof tiling, Messrs. Ames & Finnis; steel casements and leaded lights, Messrs. W. James & Co., of Willesden. The stoves and sanitary fittings were supplied by the City Iron Co., of Thames Street, and the ironmongery by Messrs. Yannedis & Co.

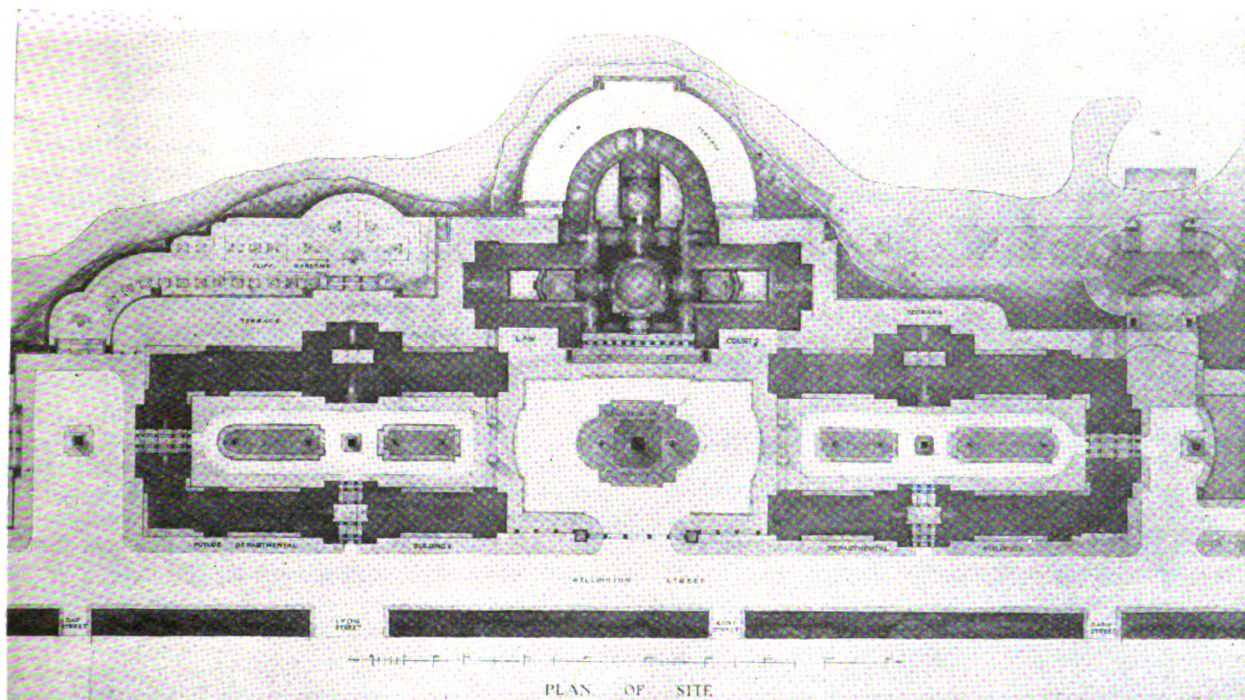
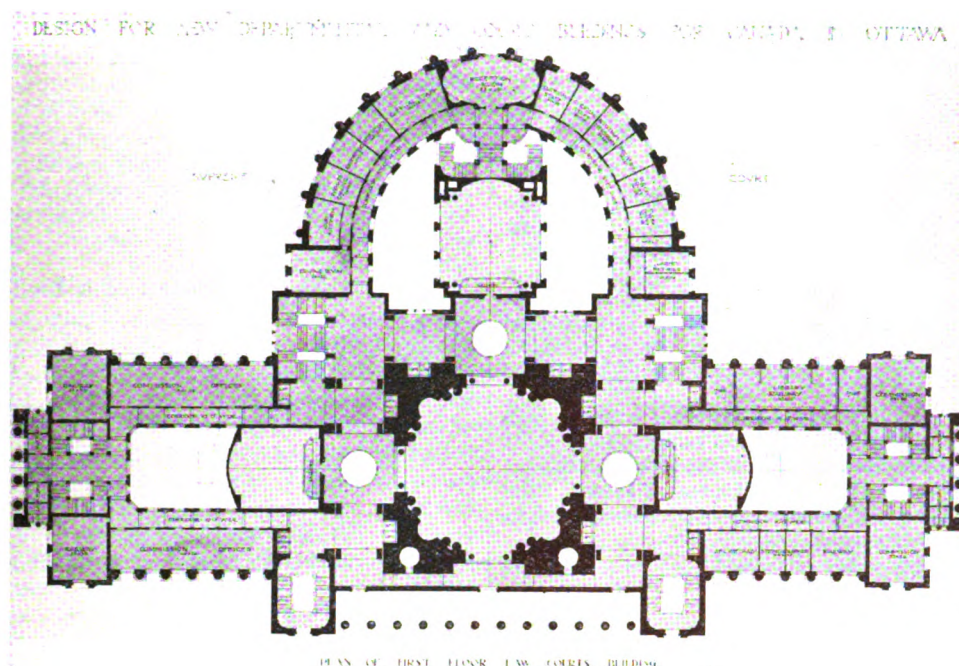
Notes and Comments.

The Building Guild and Middle Class Housing.

The Building Guild have formed a Society by means of which they can build for anyone who has one-third of the capital required to build a house. The Society finds the remaining money by means of an insurance scheme and has provisionally arranged for immediate advances up to the value of one million pounds. As the latter sum will not go very far, the Society asks that those who wish to avail themselves of its services should communicate at once with the secretary.

The Society points out that hitherto the difficulty has been to cover the period which must elapse between the arrangement to build the house and the completion of the

building, when a mortgage can be arranged. This difficulty the Society claims to have overcome. It says that under its insurance scheme the work can proceed the moment the contract is signed, with every assurance that the house will be completed. The man with, say, £300 who wanted a £700 house would require a mortgage on the house of £400. Under the Society's scheme he would insure himself on a special insurance schedule for £500, which will cost him £31 5s. a year. He insures for sixteen years, at the end of which period, if he has started while under the age of 30, the endowments will bring him back a sum of £125. This, of course, will be a material item in paying off the mortgage. The rate charge for the mortgage is 4½ per cent. If the



DESIGN FOR NEW DEPARTMENTAL AND COURT BUILDINGS FOR THE DOMINION OF CANADA IN OTTAWA, ONTARIO.
J. A. MINTY and the late A. H. HODGE, Architects.

This design was one of those submitted in the unfortunate competition for the departmental offices and Law Courts proposed to be erected in Ottawa for the Dominion of Canada.

The site proposed was a very splendid one on the banks of the Ottawa River.

The office blocks are shown grouped around the Courts of Justice, which latter is placed on a bold bluff or promontory jutting out towards the river which washes its base.

The buildings were designed in broad, simple masses (dominated by a great tower which rises from the centre of the Courts of Justice), and with a view to contrast and form a foil to the ultra-gothic of the existing Government buildings.

The design was prepared by Mr. J. Andrew Minty in collaboration with the late Albert H. Hodge.

Notes and Comments—continued.

buyer dies before the mortgage is paid off, his widow or heir will, according to the scheme, inherit the house free of charge, "and," says an official of the Society, "will probably in addition receive anywhere from £100 to £200 in cash."

The scheme differs in degree only from that of many

of the agencies through which people can obtain assistance in building operations. Its success or failure must depend on the cost and merits of the building carried out through the Guild agencies, but it shows at least that the Guild are making a great and practical effort to make themselves of use to the community.

Notes and Comments.—Continued.

Red "Labour Palace."

The Riga correspondent of the *Times* announces that a gigantic scheme has been brought forward by Kameneff, Chairman of the Moscow Soviet, for which the Government is asked to assign the sum of fourteen million gold roubles [£1,400,000].

This is a project to build in the heart of Moscow a huge "Labour Palace," having a central hall capable of holding eight thousand people, with four smaller halls around it, and a tower which shall be one of the highest, if not the highest, in the world. Preliminary plans have been worked out by M. Shchusieff, chairman of the Society of Architects, but the final plans will be the subject of a competition in which the architects of the world will be invited to enter. Valuable prizes will be awarded the winners.

According to the preliminary plans, the whole structure will occupy a surface of 216,000 square ft., and to make room for it the unemployed are to begin at once to pull down the Continental Hotel, Testova's Restaurant, and six blocks of houses. The contractors for building the palace must undertake to begin work not later than the spring of 1923.

There is every reason to believe, judging by past achievements, that the Bolsheviks will succeed in the first part of their programme, and that the present buildings will really be demolished.

We like the somewhat cynical remark of the *Times* correspondent, which we should say would be justified. If the proposed international competition eventuates it will be interesting to see how many English architects will trust the *bona fides* of the Bolsheviks!

A Large Municipal Proposal.

The Corporation of Liverpool are applying for powers to borrow £235,000 for the purchase of the site of St. Peter's Church, in Church Street, in the most valuable shopping centre of the city.

Opposition on the ground of economy by the Mutual Citizens' Union was met by the Corporation's confidence in financial gain from the purchase of the site, and Dr. Utting, chairman of the Finance Committee, declared that the purchase would go through, and without charge to the ratepayers.

It was stated that Church Street, the hub of a shopping centre for 2,000,000 people, would probably be widened to 80 feet. The Corporation had a purchaser in view for the site at a substantial profit.

The Ministry of Health have been asked to decide the question before the end of the month, pending which further negotiations with the vendors will be stopped. The success or failure of cities in dealing with these big trading ventures depends very much on the character and business-like nature of the town council concerned. Glasgow has made an enormous success of its municipal ventures; other towns, including Swansea, have been less fortunate. But a timely purchase may prove a gold mine not only in municipal but national affairs. Had we years ago bought Delagoa Bay, when we might have had it for a comparatively small sum, most of the difficulties of the South African War would have been obviated, and in addition the development of the Transvaal would have received a great impetus.

The National Federation of House Builders.

The National Federation of House Builders, in a communication we give elsewhere, make some interesting statements about the cost of building with which we are in general agreement. With the criticism that the reductions in cost of building have been exaggerated by the Ministry of Health's spokesmen we concur, and it is also clear that statistics based on one particular type of building are apt to be misleading. On the other hand, we think that the Federation a little underestimates the fall which has taken place, which we believe brings down the cost of most buildings to about 100 per cent. above what they were in 1914.

The main and most important consideration appears to be that we have no reason to believe that from this time onwards prices are going to fall very much for a long time to come, if at all, and that therefore the reasons which have prevented the prudent from building during the last few

years no longer obtain. It may even pay many to build now, for there is little doubt that many contractors whose standards of values have been upset by the frequent changes which have occurred in the past two years are apt to take somewhat sanguine views of what may happen in the near future. In other words, they are willing to take risks by cutting estimates of cost very fine; and where this is the case those who expend money in building have an added advantage which will disappear with the steadying of building prices.

The Education of a Beetle.

The beetle which has been responsible for so much damage at Westminster Hall has also turned its attention to Staple Inn, where the oak work of the roof of the Hall has been attacked and in some places reduced to a fraction of its original substance, while the soft wood adjoining has been left untouched. This is unfortunate, and what seems to be required is a course of artistic education for the destroyer. An insect which would commence its operations on badly designed buildings and destroy their substance would be invaluable to the cause of architecture. There would also be this added advantage, that badly designed buildings are not few and far between and the educated beetle would have greater opportunities than his ignorant colleague. What is required is to first train the beetle to enjoy a soft wood diet and then confine him to the contemplation of some of our monstrosities. In this manner a useful habit might be built up.

The Spoiling of St. Ives.

It is stated that the picturesque character of St. Ives is in danger of being eliminated by modern improvements which were heralded by the ambition of fishermen who made money during the war to "improve" their own dwellings. The latest proposal is to widen the roads round the harbour by the demolition of some picturesque old buildings there, a proposal which has met with a storm of protest from the colony of artists living in the neighbourhood. There is usually another side to these questions. As a summer visitor we delight in the evidences of antiquity and aloofness from the world, but as a resident whose horizon is limited we may set a value on amenities the provision of which makes for the destruction of rural character. This is another instance among many which helps to prove the urgent necessity of the universal application of the Housing and Town Planning Act to the length and breadth of the country. That Act means the proper regulation of growth which must take place and changes which must come, for we cannot, in this age, keep whole districts crystallised in their development for the benefit of a few, while it is equally obvious that regulation of growth and development should be exercised in the interests of all.

Sir Banister Fletcher, F.R.I.B.A., will, on Wednesday evenings at six o'clock, deliver a course of twenty-four University Extension Lectures on "The History of Architecture (Part III. Renaissance and Modern)" at the Central School of Arts and Crafts, Southampton Row, W.C. The lectures will include a consideration of the Renaissance Architecture of England, France, Germany, Belgium, Holland, Italy and Spain, and will be fully illustrated by special lantern slides, photographs, diagrams and models. The introductory lecture, which will be open to the public without tickets, will be held on Wednesday, September 27.

The Belfast Corporation, at their meeting on the 15th inst., authorised the Libraries, Museums and Art Committee to proceed with the erection of the first section of the oft-deferred new Art Gallery and Museum in Botanic Gardens Park, approving an application for the sanction of the Ministry of Home Affairs to a loan of £80,000 necessary for the purpose. They further authorised the Housing Committee to take the necessary steps to have 200 houses erected on the Woodvale site—100 to have two bedrooms and 100 three bedrooms, and all to have bathrooms, sculleries, &c. The estimated cost is £327 and £378 each respectively. Tenants will be afforded facilities to purchase the houses under the provisions of the Small Dwellings Acquisition Act at the actual net cost to the Corporation after the grant made by the Ministry of Labour in respect of unemployed workmen engaged in the scheme has been taken into account.

London Art Galleries.

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The London Salon of Photography, which has opened its autumn exhibition from September 9 to October 7 at the Galleries in Pall Mall East, of the Royal Society of Painters in Water Colours, is giving us this year a very attractive and interesting display, and one which, in my judgment, will compare very favourably with those of previous years. This applies equally to portraits, figure work and landscape, which are naturally the three main divisions into which the photographs shown may be conveniently divided. It seems to me that the male portraits this year are exceptionally good in choice of subject, lighting and technique. I imagine that it is really more easy, using a certain judgment and selection, to get a good portrait study of a man than of a woman; in any case this seems to be the result shown here, although there are some very clever portrait studies of women, such as R. Polak's "Miss R. in her car," Charles Borup's "Velvet Cap," Stuart Taylor's "Cassandra"—both of which last I should class as being actually portrait studies—Hugh Cecil's "Trini," and Bertram Park's "Gladys Cooper" in a pose which suggests the problems of destiny which confronted and overwhelmed the second matrimonial venture of Mr. Tanqueray.

But even admitting the interest of these and others, they do not reach the character and strength of such studies as the fine head of John Galsworthy by Furley Lewis, the "J. Leeming Walker," by Pirie Macdonald, the clever characterisation of Charles Taylor's "L'Apache," the admirable likeness of Burgomaster Max, by Vandyk, or that of the Right Hon. Viscount Grey by E. D. Young. No doubt in most of these cases the artist has been fortunate in his model; for a strongly marked man's head, with telling lighting, can hardly fail to score; but even granting these conditions here the technique and composition are excellent, and show the individuality and character of the sitter grasped through the intuition and sympathy of the artist.

The figure work, always an interesting feature of these exhibitions, compares favourably with previous years; and here the Earl of Caernarvon is again a successful exhibitor. His figurehead design is really a clever portrait study—head and bust—of a very charming model, though to a competent carver it might suggest a figure-head; and his "Figure Study" and "The Toilet" are delightfully composed. The same may be said of Yvonne Park's "Figure Study" of a young girl, and C. A. Bromley's "Summer and the Sea," which, like Francis Jay's "Mermaid's Rock," combines the figure with an effective setting of sea-girt rocks. Next to this last G. C. Dall 'Armi in his "Pacchiana" gives a study of an Italian peasant girl effectively printed on coarse paper; and A. F. Kales in "Egyptienne" shows the living model in costume and hieratic pose identical with the figure on the wall behind, yet wanting in the grand sweep of line of this lady of the time of the Pharaohs. In this line of subject an interesting departure, to an artist well founded in his classic writers, might be to take some of the characters of Greek legend or mythology or even some of those wonderful Etruscan dancers, and visualise them for us with the camera.

In the landscape this year I noticed Alex. Keighley's work in "The Castle Hill," and still more in his clever "Turnip Field"; as well as Mrs. Ambrose Ralli's "Greek Monastery," "The Mosque Moonlight," by de la Mare Norris, in dealing with architectural motives, and Ward Muir's "Cannon Street Station," which under the camera here looks surprisingly picturesque. F. O. Libby seems to me admirably suggestive in such themes as his "Moon-glitter," and again in two studies—"The Gull Rock" and "Moonlace," hung beside Dr. Lovejoy's "Nocturne by the Sea." These studies, like another trio here by the same artists, are on dark blue paper, the whole treatment kept what in painting would be called very loose, and they are wonderfully charming and effective. In this genre of pictorial photography the selection, treatment, paper, even mounting all tells immensely; and we feel here that the

camera has still infinite possibilities in art, which such displays as this help to develop.

At the Gieves Gallery Mr. Henry T. Wyse is giving an exhibition this month of his pastels, oil paintings and pottery. It is satisfactory that his exhibition should include the last feature, for this artist is a frequent contributor to the Scottish Guild of Handicraft in Glasgow and the Principal Art Lecturer at the Edinburgh Provincial Training College; but I shall devote my attention specially here to his painting. The exhibition was opened on September 8 by Sir John Martin Harvey, who is an admirer of Mr. Wyse's work, and keenly interested in art, having himself, as I happen to know, a collection of Italian medals; but the exhibition seems to have been noticed in the press as if that distinguished actor was himself an exhibitor, and Sir John, in his opening address in the Gallery, alluded to this in a very amusing manner. "I am afraid," he said, "that some of you are here under a rather false impression, as I saw a notice in a newspaper the other day to the effect that Sir John Martin Harvey is giving an exhibition of his work in this domain of art, the Gieves Art Gallery. The notice went on to say that the quality of Sir John's work, both in oil and water colour, will come as a delightful surprise to many!"

"I think it will be a surprise," he added, "but nothing to the surprise to the gentleman himself concerned! I wonder how these things get into the papers? I am not at all sure that Mr. Wyse is not responsible for this extraordinary piece of information himself, as a means of obtaining publicity. Mr. Wyse comes from Edinburgh, from north of Tweed—a country of very modest people, who try to hide their light under a bushel." Coming now to the paintings, many of which are put in in pastel, I found one of the most successful the one called "Tranquility"—an English landscape I should imagine, with a sense of verdure, with great trees stirred lightly by the wind, and white clouds drifting lazily across a pale blue sky. And this title seems, in fact, to give the key-note to all these studies, scenes of tranquil beauty, of warm rich colour. Sometimes Monet's influence is suggested; again sometimes we find an opulence, a breadth of treatment like that of Tom Mostyn, especially in the oil paintings, such as "Opulent Autumn" and the delightful nocturne, showing the new moon in the arms of the old. Mr. Wyse, the son of a Dundee banker, studied in Paris at the Colarossi and Julian Academies, and it is not the first time that his work has been shown in London.

At the Victoria and Albert Museum there are being now shown two important tapestries from the Hampton Court Brussels set, illustrating the "Story of Abraham." These pieces were woven in the second quarter of the sixteenth century, and their earliest mention is in an inventory of Henry VIII's effects dating from 1548; their materials are coloured wools and silks and silver-gilt thread.

An interesting notice comes from America that Mr. Joseph Widener has recently acquired for his collection Rembrandt's "Descent from the Cross," the sum mentioned being 500,000 dollars. This can hardly be the famous "Kreuzabnahme" of the Munich Pinakothek, of which I have a good colour reproduction, published by Seemann, of Leipzig, before me as I write; it is far more likely to be that of the Hermitage, which is the larger of the two, and was signed "Rembrandt f., 1634." The Soviet rulers of Russia are known to have been looking for ready money, and Mr. Widener, if it has indeed come to him from this quarter, may be congratulated on acquiring a great painting, which will at least be now in safe hands, and valued as it deserves.

S. B.

Through the vigilance of two members of the Chelmsford Diocesan Advisory Board a communion cup and cover, purchased by the rector and people of the parish of Pattiswick, Essex, in 1702, have been recovered and restored. They were advertised for sale in a London auction room as "the property of a lady," but on representation to the auctioneers they were withdrawn and privately sold. They are now the property of the Essex Archaeological Society, and will be lent in perpetuity to the parish of Pattiswick.

Modern Methods in Building Construction.—XXXIII.

By Albert Lakeman, M.S.A., M.C.I.

BRICKWORK.

Brickwork is not a modern development in constructional methods, and the tendency is to consider this type of work as old fashioned when compared with the more up-to-date methods of reinforced concrete, concrete blocks, and various patent schemes which have been developed so extensively during the last few years. As a constructional material, however, brickwork is far from being obsolete, and it possesses considerable merit which will ensure its extensive use in spite of the competition that now prevails.

The modern developments in respect of brickwork have been concerned with the methods of handling and laying the bricks to reduce cost and increase output, and scaffolding has received considerable attention as being one of the features which have increased the cost and delayed progress when carried out on ordinary lines.

Some of the advantages of brick construction are the small-size units which are easily handled, the satisfactory appearance that can be obtained without any special surface treatment, and the lasting properties of good-class bricks even when exposed to adverse climatic conditions. It is, of course, not the ideal material for all classes of work, because a more homogeneous material like concrete is preferable for retaining walls and similar features where lateral strength is required, but for ordinary walling, both externally and internally, brickwork is a good material. Where additional strength is required some reinforcement can be inserted in the joints to bond the courses more thoroughly together, and several patent types of light steel wire mesh have been placed on the market during recent years to enable this additional strength to be given without much trouble or expense.

One of the greatest disadvantages of ordinary brickwork compared with some of the more modern types is the loss of floor space that occurs owing to the comparatively thick wall or partition that is necessary to gain the requisite strength, particularly if the height is considerable and loads have to be carried. In the case of a concrete partition or wall built in situ reinforcement can be added, which will allow a very thin construction that is capable of supporting floor or other loads in a simple manner, but with brickwork this cannot be accomplished. Again, the use of brickwork results in a large increase in the amount of dead load to be carried, which necessitates increased foundations, and in the case of brick partitions carried on the upper floors the structural frame must be stronger in order to carry these than with light concrete slabs or hollow blocks. Brickwork has, however, one advantage over concrete, and this is shared by all materials which are manufactured from a substance which is burnt at a high temperature, viz., it is not so subject to cracks after it has been in position for some time in the building. Concrete slabs used in walls and partitions, unless absolutely seasoned—and it is difficult to guarantee this—will be subject to shrinkage and contraction generally which will result in cracks that are unsightly, and where the work has been plastered and finished off at some expense these cracks are a serious matter.

Provided the foundations are designed and constructed in a sound manner, a building with brick walls will not exhibit cracks and defects due to temperature changes, but this does not apply to concrete walls of large area.

Alterations are also easily carried out when brickwork is used for the walling, and this may be an important consideration when the buildings are intended for use in connection with a growing industry or business.

With regard to suitability, therefore, it can be shown that brickwork as a constructional material is still able to take its place on modern work.

The other points that will naturally arise when comparing this material with others will be those dealing with cost and speed, as these are the two factors which determine the value of a material or method in present-day work. The cost has been considerably affected by the high price of bricks and cement, the war-time increase in wages and, most serious

of all, the reduced output of bricklayers. All materials used in constructional work increased considerably in price, and the increased wages were also applicable to all trades, but it is extremely doubtful if the output suffered in any class of work as much as it did in bricklaying. A welcome improvement has taken place recently, and the cost of brickwork is rapidly coming down, but on many schemes the use of brickwork was abandoned solely on account of the high cost, and this high cost could have been avoided if a reasonable output had been maintained. The author is not an advocate of sweated labour, but at the same time is certainly in favour of a minimum wage accompanied by a minimum guaranteed output. This is as essential to the workers themselves as it is to the employer, as without it the amount of work that will be undertaken will be very limited. In the early days after the war the output in this country generally was extremely small and out of all proportion to pre-war output or the scale of wages, and the number of bricks laid by many men per day did not exceed 250, while an output of 400 per day was above the average. At this same time bricklayers in America were giving an average output of over 1,000 per day, and in many cases the number laid exceeded 1,200, and this on ordinary work at the ordinary standard wage. The effect of this excellent output was beneficial to the bricklayers, as the use of brickwork was increased, and on some schemes a change over from concrete to brick was made for many features, such as dwarf walls, floor trenches and manholes, because the brickwork generally on the other parts of the scheme progressed so satisfactorily. Comparative costs between brickwork and other materials such as concrete are very difficult to state, and in fact it is impossible to make a comparison of any value unless a definite structure is taken and figures based on actual unit costs are taken. The substitution of brick for concrete may entail additional foundation work, the introduction of piers and a loss of floor area, and thus it is not sufficient to state merely that a yard super of brickwork can be built for a certain sum of money, whereas a concrete wall would cost so much more or less. Generally speaking, however, in simple structures brickwork will prove as economical as any other material of equal strength and endurance, but for high buildings or for carrying exceptionally heavy loads it is likely to prove more expensive. Any comparison must also take into consideration the class of bricks employed and the distance from the place of manufacture to the site of operations, and thus a specific case is required.

As regards the speed of execution it would be difficult to produce any evidence of record breaking work where brickwork was the principal material used and, generally speaking, on a scheme of any magnitude concrete construction can be carried out more speedily. When the brickwork is used as a filling only to a framed structure it can be carried out quickly if the lineal feet of walling is sufficient to allow a large number of men to be employed. The speed is naturally limited to that which can be achieved by the maximum economical number of men spaced along the line of walling,

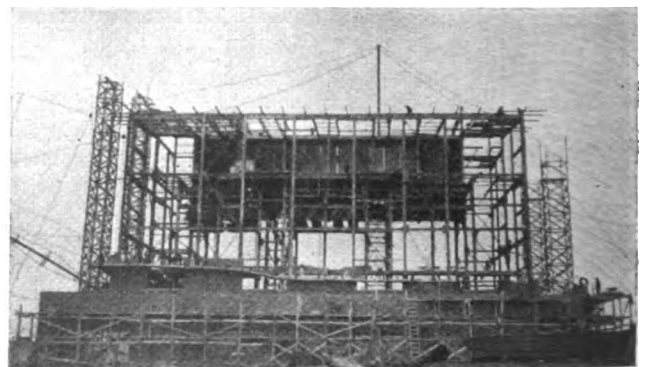


Fig. 168. BUILDING BRICKWORK TO BOILER HOUSE.



Fig. 169. BOILER HOUSE NEARING COMPLETION.



Fig. 170. VIEW OF SUSPENDED SCAFFOLD.

and in this respect it is unlike some of the other types of construction where the speed can be increased by the introduction of mechanical appliances rather than by the employment of additional labour. The speed will, of course, be greatly influenced by the type of scaffolding and the methods of feeding the bricklayers with materials, but this will enable a certain limited output to be exceeded, and this output is entirely dependent on the human element. If the number of bricklayers is increased to an excessive figure the cost will be comparatively high, because the operations of each man will be hampered and his scope limited, which is certain to result in a reduced individual output; hence the reason for stating above that the speed is limited to that which can be achieved by the maximum *economical* number of men that can be spaced along the line of walling. An example of speedy work in the erection of brickwork is shown in figs. 168 and 169, which illustrate a large boiler-house under construction in America. There are just half a million bricks in the walls of this building with the pump-house adjoining, and they were laid entirely in seven ordinary working days. The number of bricklayers employed was on an average sixty-five per day, and the daily output per man was therefore practically 1,100 bricks over the whole scheme.

In this particular instance the building was designed with a reinforced concrete basement storey and steel-frame construction, with brick walls for the upper portion of the structure. The reinforced concrete work was carried out without any difficulty, but owing to industrial troubles the fabrication and delivery of the steelwork was very much delayed. This delay was a serious one, because the erection of the constructional steel could not be completed until the beginning of November, and the boiler-house was required for use during the winter weather. It was essential, therefore, to speed up the work to the walls and roof immediately the steel would allow this to proceed, and how well this was done can be judged from the fact that the structure was bricked up in seven days, and the concrete roof and glazing to the windows were executed at a similar speed. It is interesting to note that two days after the building was completed as far as the carcass was concerned, an exceptionally heavy snowstorm occurred, which resulted in a fall of 17 inches of snow, and all outside work had to be suspended.

The speed accomplished in this case was invaluable, because the loss of a few days would have resulted in the total suspension of the work for a time and the risk of intermittent progress, if any, during the winter weather. The installation of the boilers was proceeded with under cover of the structure and one battery was actually completed and under steam by Christmas Day. Upon reference to fig. 168, it will be seen that ordinary fixed scaffolding was used for the pump-house walls, which were comparatively low, but for the boiler-house itself, which was about ninety feet high, a suspended scaffold was used, and this proved a great time and labour saver. With ordinary scaffolding the bricklayer is limited to work in stages of a reasonable height above the level of each fixed platform, and when this height is reached delay must be experienced while the scaffold is being extended to the next stage. The men can

of course be transferred from one point to another, but it means that the whole line of walling is not available at any one time, and therefore the possible number of men that can be profitably employed is reduced. With an adjustable scaffold the level can be altered from time to time to give a *convenient* working level, and in the illustration above referred to it will be seen that the staging is higher at some points than others, and the men at the lower level are thus compelled to put forward a real effort to keep pace with the men who are giving the quickest results. A closer view of the type of scaffold used is given in fig. 170, and the principle consists of fixed overhead supports at a high level from which steel ropes are suspended, with the lower ends passed in each case around the drum of a small hand-operated winch. The winches are placed at the inner and outer edges of the scaffold, and are connected to cross bearers upon which the usual scaffold boards are laid. By turning the winches the suspension rope is wound up and shortened, thus raising a portion of the scaffold in a few minutes. In America these appliances can be obtained on hire, and it is not therefore necessary for the contractor to make any initial outlay for this special equipment. Another factor that contributed to the speed of the brickwork and the other trades following was the introduction of special arrangements for supplying large quantities of materials quickly at the level required. These special arrangements included the erection of four timber-hoisting towers, each of which was built up of 6 in. by 2 in. timbers nailed at the connections, and in these towers were provided four hoists worked by steam power, which enabled loaded barrows or buggies filled with bricks or mortar to be run straight on to the platform of the hoist, raised to the scaffold level, taken off, and wheeled to the required position when the contents were discharged. Each tower served one quarter of the length of walling, and although at first sight this number of material hoisting towers may appear excessive, upon consideration it will be realised that the provision was a reasonable one, bearing in mind the speed that was necessary, and over 70,000 bricks had to be hoisted each day with sufficient mortar to allow the number to be laid. The whole of the hoisting equipment was in continuous operation, and the men were kept well supplied with bricks and mortar. The towers were also used for hoisting up the materials for the roofing before dismantling, and the outlay was therefore not confined to the brickwork alone. The building of brickwork to a considerable height at great speed is not generally favoured, owing to the danger of the bottom joints becoming compressed by the weight above before they have time to become sufficiently hard to resist this weight, and the result is excessive settlement. The usual allowance for settlement in brickwork, owing to the compressibility of the joints, is about one inch for every forty feet in height, and this allowance is based on work which is executed at a normal speed. In the case of the boiler-house above referred to, the lower joints were "penned" with pieces of slate or tile to prevent excessive compression, this method consisting of placing small pieces of the hard material at intervals on the horizontal wall joints to give a temporary solid bearing, and prevent the mortar being squeezed out while the hardening was taking place.

It is interesting to note that the American bricklayer refuses to work with ordinary cement mortar for general work owing to the harshness of working, and a certain proportion of lime must be added to make the mortar work "fat." This condition has resulted in the introduction of what is in reality a special cement known as "Carney's cement," which is delivered to the work in barrels, all ready for use, to avoid the delay and trouble caused to the contractor if ordinary lime has to be prepared and gauged, in addition to Portland cement, when the mortar is being made. This special cement is very reliable, and a good hard mortar results, while it is extremely easy to work with, and the proportions generally adopted in the mixing are similar to those used for ordinary cement mortar.



Fig. 171. GENERAL VIEW OF SUSPENDED SCAFFOLD.

Another example of the use of suspended scaffolding for brickwork is shown in fig. 171, where a large three-storey building is under erection. This illustration also shows a concreting installation with storage pile, derrick and grab and aggregate bin, with the hoisting tower and chute for transporting the concrete right across the width of the building, which is 210 feet wide and 560 feet long. It will be noticed that railway sidings are taken right past the mixing plant, and all materials could be unloaded directly at the point required.

In the foreground can be seen portions of a large pipe subway, some of which has been completed and the remainder is under construction. It will be observed that the work is in different stages, and practically all the trades are at work following up as each section is completed by the trade in front, and this can be taken as a typical example of modern operations as carried out in America. Reverting to the question of the speed of executing brickwork, it will be seen that considerable speed is possible from the foregoing example where the work is well organised, and it does not compare unfavourably with other methods of construction in this respect. Skilled labour is however essential, and this fact is likely to increase the cost as compared with reinforced concrete, where unskilled labour can be employed if the supervision is good, but this skilled labour can produce work at a competitive price if the output is maintained at a high figure commensurate with the wages paid.

(To be continued.)

PART II.—XI. Foundation Work (Ordinary soils, Soft soils), April 7; XII. Foundation Work (Soft soils), April 17; XIII. Foundation Work (Soft soils), April 21; XIV. Foundation Work (Soft soils), April 28; XV. Foundation Work (Soft soils), sheet piling, May 5; XVI. Foundation Work (Soft soils), steel-sheet piling, May 12; XVII. Foundation Work (soft soils), steel-sheet piling, pumping, May 19; XVIII. Foundation Work (Soft soils), pumping, May 26; XIX. Foundation Work (soft soils), foundation piles, June 2; XX. Foundation Work (soft soils), foundation piles (cont.), June 9; XXI. Foundation Work (soft soils), foundation piles (cont.), June 16; XXII. Foundation Work (soft soils), Waterproofing, June 23; XXIII. Foundation Work (soft soils), Waterproofing (cont.), June 30; XXIV. Waterproofing (cont.), July 7; XXV. Water Supply, July 14; XXVI. Concreting, July 28; XXVII. Concreting (cont.), August 4; XXVIII. Concreting (cont.), August 11; XXIX. Concreting (cont.), Aug. 18; XXX. Concreting (cont.), Aug. 25; XXXI. Form Work, Sept. 1; XXXII. Form Work (cont.) Sept. 8.

Correspondence.

"On the Road in Holland.—I."

To the Editor of THE ARCHITECT.

SIR,—Mr. Harper's charmingly written and illustrated "Holland" is most enjoyable, but with respect, is he not in error (page 175) in allocating its black Basalt stones to Norway?

An English dock engineer and myself inspected considerable Dutch dock harbour and river-wall work in the same basalt in 1910, also quarries at Linz, on the Rhine, whence, I believe, all the columnar basalt laid in Holland originated.

The cost of "A Temporary Official's Little Dwelling" in Mesopotamia is amplified by Lord Ashley's letter to the "Morning Post" of September 12.

Yours faithfully,

FRANK L. SHACKLETON.

John F. Shackleton & Son,
Goole, Yorkshire.

A Publisher's Correction.

[To the Editor of THE ARCHITECT.]

DEAR SIR,—On page 131 of your issue of August 25, which has just come to hand, we notice that you make a price of \$4.00 on our Student Edition of the "Georgian Period." Evidently you were thinking of our "Dalzell Book," which price is \$4.00 while the other should be \$15.00.

Won't you please give this a correction notice at the earliest possible date?

U.P.C. BOOK COMPANY,
243 West 39th Street,
New York,

September 11, 1922.

Some Criticism.

To the Editor of THE ARCHITECT.

SIR,—Wherever I go I see modern architects and builders putting up cottages and houses with atrocious windows.

1. They are put up *too high*, so that it is impossible to see out on to the flowers and grass, unless you stand *up*, which is *idiotic*, and they are *too small*. A man in a charabanc said to me, "Why do they put the windows up so *high*?" I said, "Because the architects and builders are *fools*." So they are—*utter fools*. You might as well be in a *slum* if you can't see the *garden and flowers*, etc., without *standing*. Also the bedroom windows are ditto. Quite depressing policy.

2. Why are not French casements and French windows more introduced? The climate is *just* the same here as in Belgium, Germany and Northern France, where *balconies* abound. Why are there so few balconies with French windows?

3. Why are there practically *no verandahs*?

4. Why are not steps up to the door extinct? Put them *inside* and save billions of women going down on their knees to wash them, and their skirts getting all *filthy* around. *FILTH!* If they had to do it, you would jolly well alter this fool thing.

5. Why are not fixed *basins* in bedrooms the *rule*?

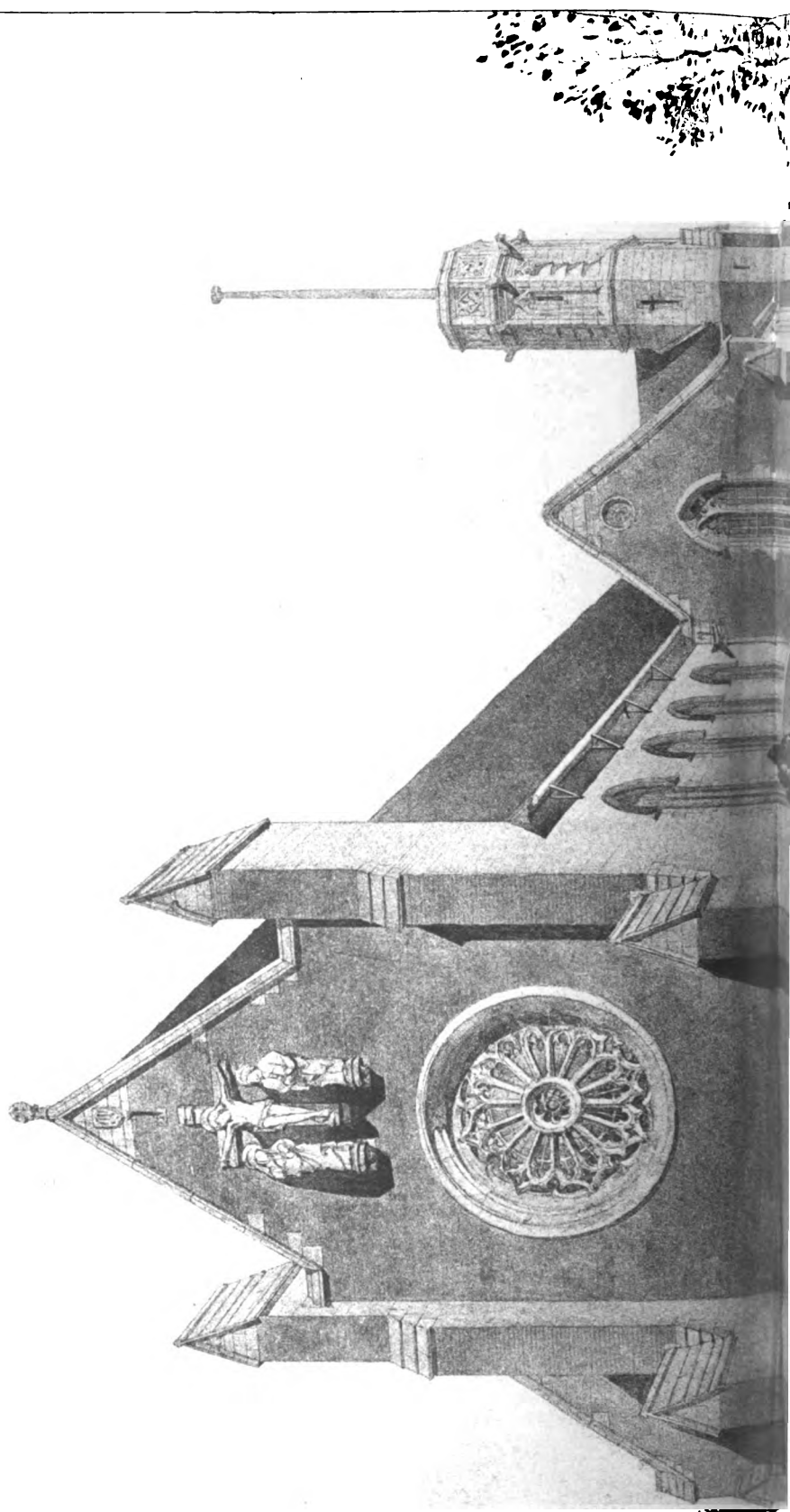
6. Why are lifts not *universal* if dining room and kitchen are *not* on the same floor?

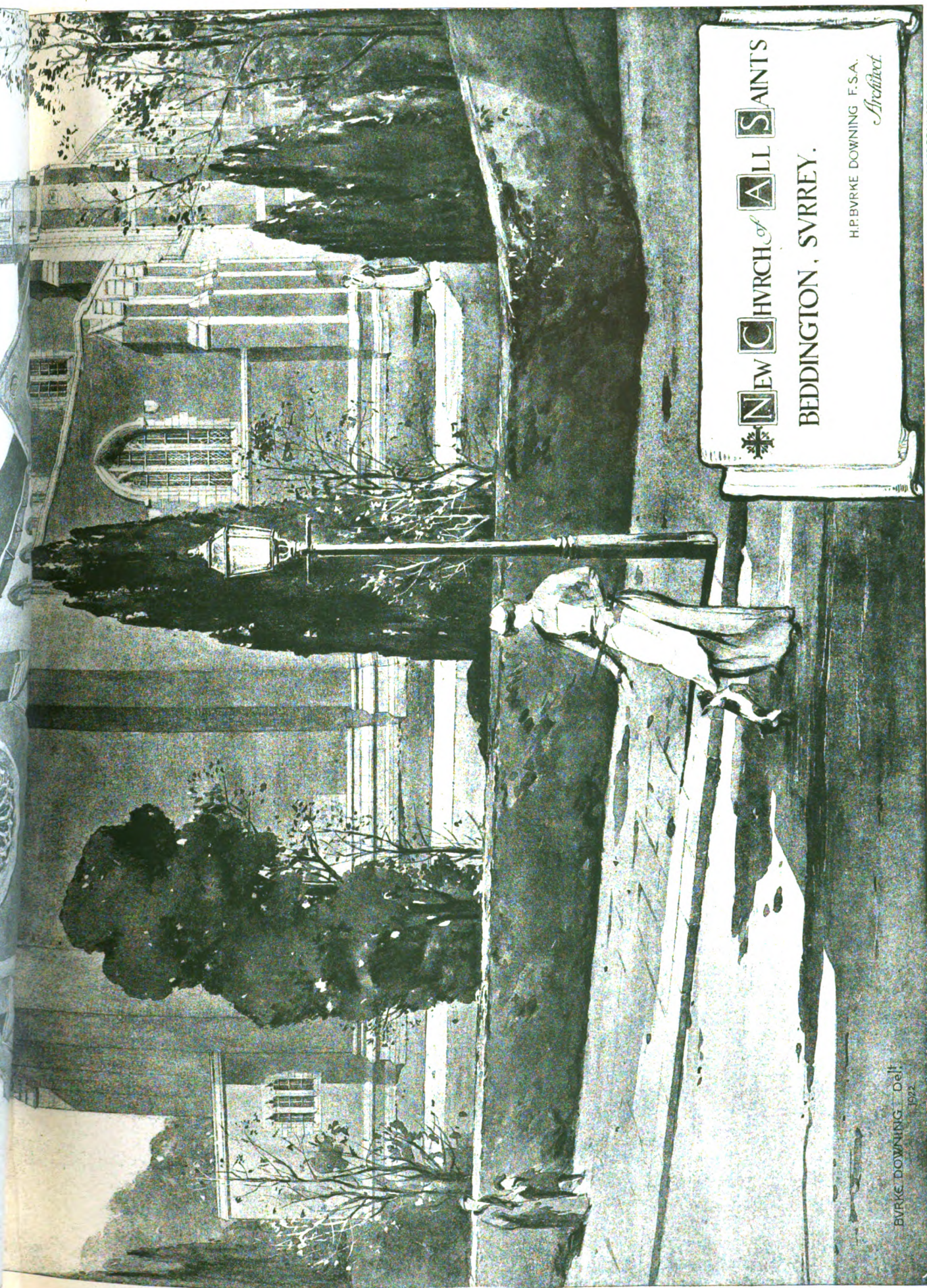
I am going away, so do not write to me.—Yours truly,

M. DALE.

P.S.—I speak on *Housing* sometimes.

[Our correspondent is somewhat intolerant. He evidently belongs to that section of people who like to live surrounded by large glass windows. If so he can, if he wishes, suit himself, but we have usually been quite satisfied with the window of normal height, which is between 2 ft. 6 in. and 3 ft. up from the floor, sometimes rather more in old houses. If one wants to see every part of a view from every position in a room it is necessary to have the side of the room all window, which is what our correspondent evidently likes, but which we should very greatly dislike. Again, houses are built to protect their occupants from heat and cold, and the greater the proportion of window space the more nearly inside and outside temperatures approximate to one another. So much for windows and the fools of architects and builders referred to. As to balconies and verandahs, both cost money, and many of us use them very little if we have them, but our correspondent can build a house which is surrounded with them if he likes to pay for them. As to steps again, most houses are built about 1 ft. up from the ground, which means two 6 in. steps. It would be necessary to have one of these outside; would it be a great gain to have the other inside? And if the height above ground level is greater many of us, including ourselves, would prefer the appearance of external steps up to a door, steps which can be washed down without being whitened. ED.]





NEW CHURCH of ALL SAINTS

BEDDINGTON, SURREY.

H.P. BURKE DOWNING F.S.A.

Architect.

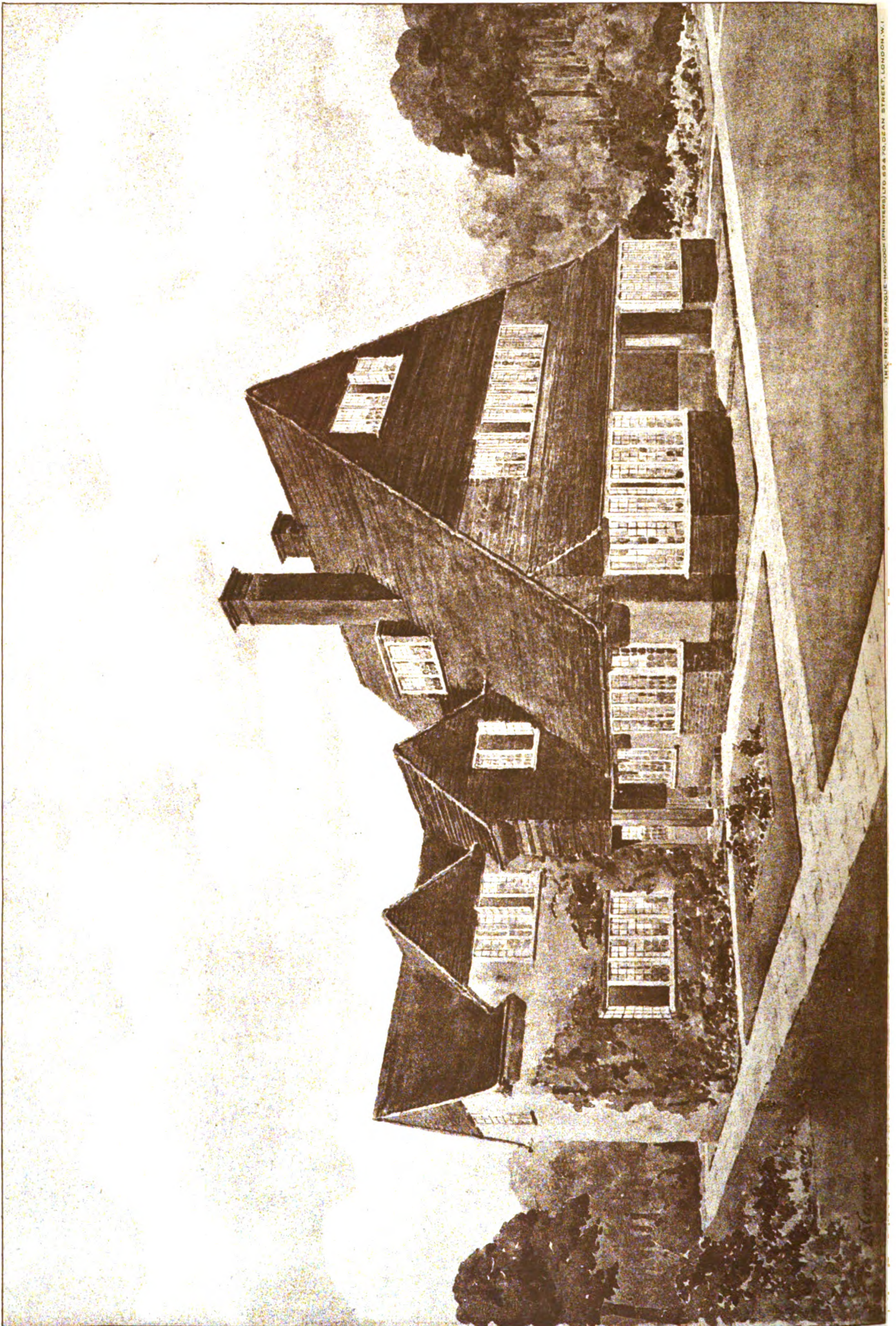
BURKE DOWNING Del.
1922

"INK PHOTO" SPRAGUE HAYCOCK (PRINTERS) LTD 69 & 70 DEAN STREET, LONDON, W.1.

R.A. Exhibition.

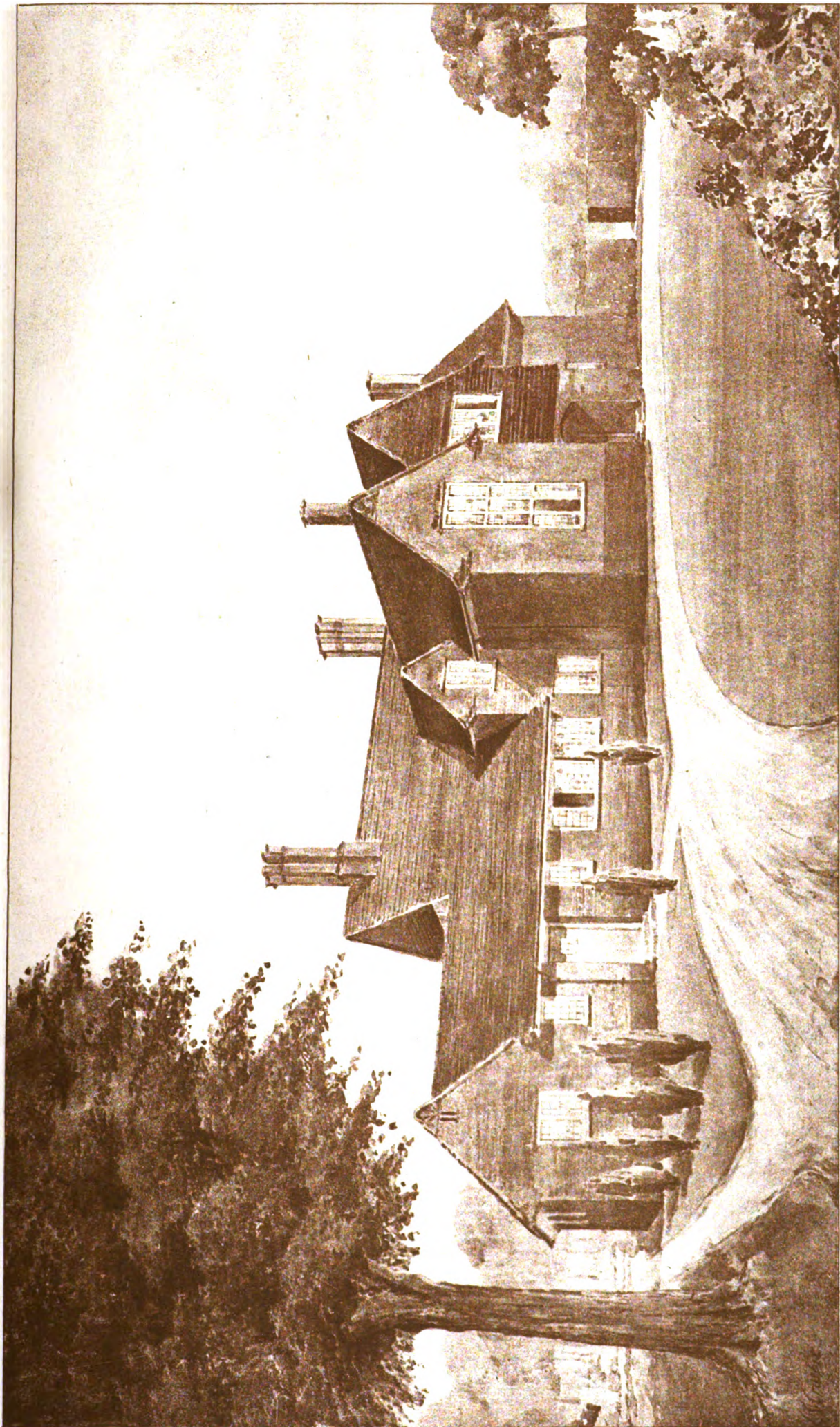
ALL SAINTS MEMORIAL CHURCH, BEDDINGTON, SURREY.

H. P. BURKE DOWNING, F.S.A., F.R.I.B.A., ARCHITECT.



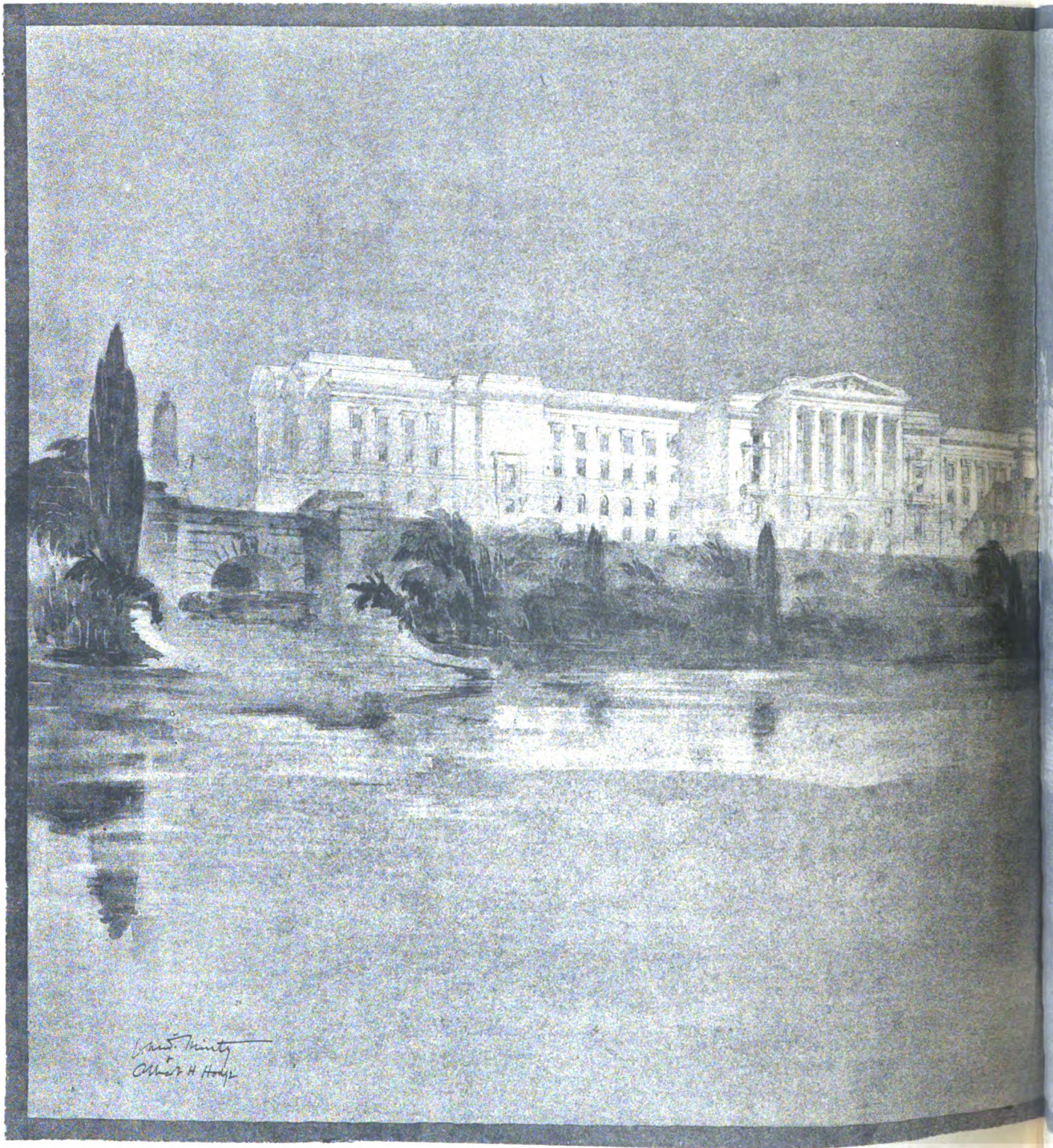
HOUSE AT BURGH HEATH, SURREY: GARDEN FRONT.

THE PHOTOGRAPH BY SPADULE (PRINTED) LTD 88 & 90, GEAR STREET, LONDON, W.1.



INK PHOTO: SPRAGUE-HAYDOCK (PRINTERS) LTD 69 & 70 DEAN STREET, LONDON, W. 1

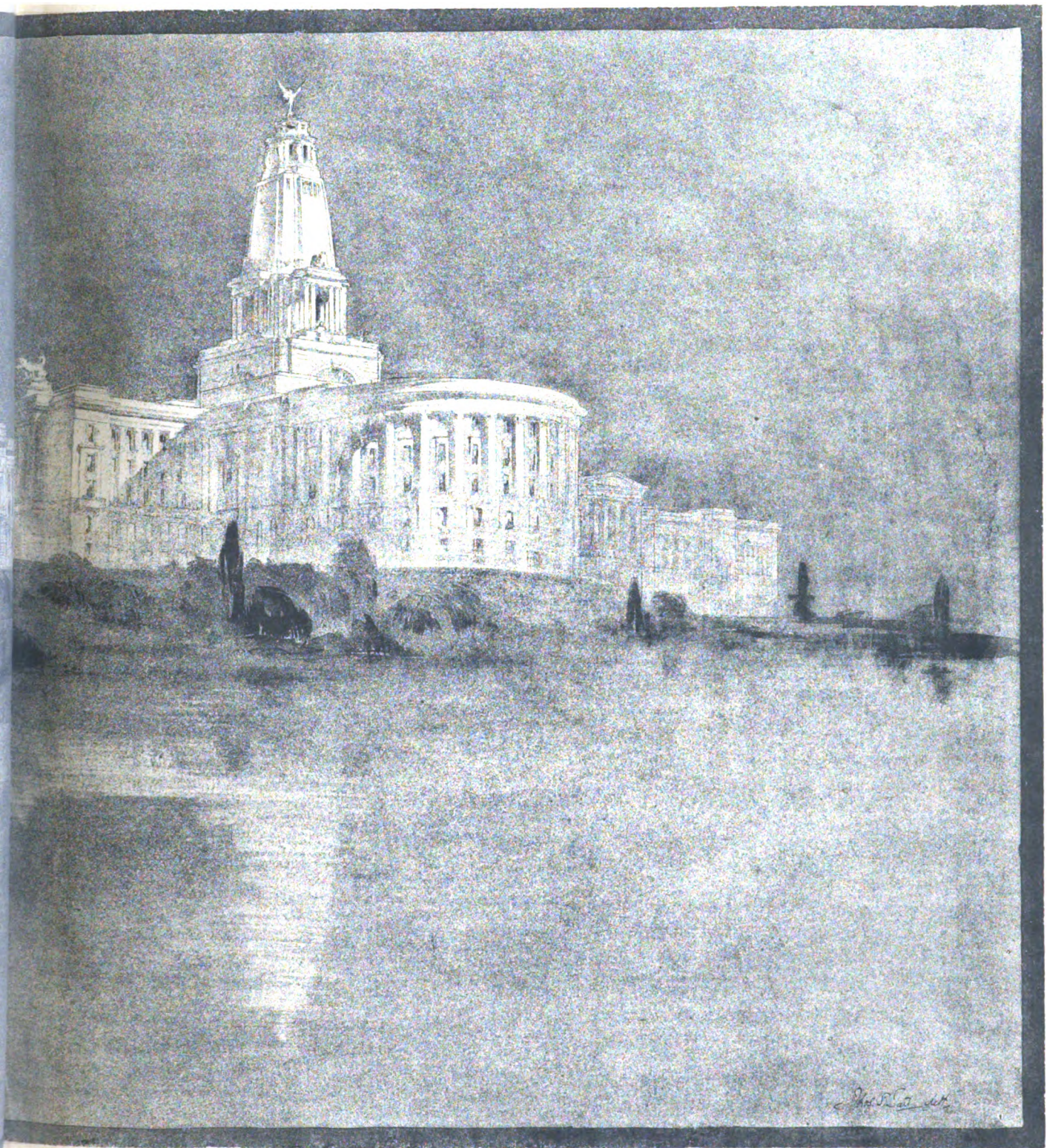
HOUSE AT KINGSWOOD, SURREY: ENTRANCE FRONT.
L. STANLEY CROSBIE, F.R.I.B.A., ARCHT.



J. A. Minty
Chas. H. Hays

GOVERNMENT BUILDING
BY J. A. MINTY AND CHAS. H. HAYS

SEPTEMBER 22nd, 1922.



"INK-PHOTO" SPRAGUE-HAYCOCK (PRINTERS) LTD 69 & 70 DEAN STREET, LONDON, W.1

OTTAWA, CANADA.
H. HODGE, ARCHITECTS

On the Road in Holland.—III.

By Charles G. Harper.

Dronrijp is a typical Dutch village, with an exceptionally fine fourteenth century tower to its church. The place is true Friesland in its quiet charm.



DRONRIJP.

Friesland is not that part of the Netherlands where you will find quaint costumes: with one exception. That is the old fashion, still greatly followed by the middle-aged and older women of the village and peasant class, of wearing the *oorzyer*, or golden helmet. This is in the nature of a skull-cap, made of thin plates of gold and fitting exactly to the back of the head and coming almost to the forehead. To wear this ancient covering it is necessary for the hair to be cut close. That is the chief reason why the young women of the present day will not follow this ancient custom. At each side of the golden helmet, above the ears, are decorative plaques of the same metal. Over the helmet is worn a lace cap. One of these astonishing head-dresses will cost 2,000 guilders, or about £150. Most of them are heirlooms, handed down for generations. Those who have not been able to afford the gold *oorzyer* will have a silver one.

But the most remarkable lack of taste and understanding is seen in these old women going to market not merely in their strange panoply, but with the helmet and its covering lace cap still further crowned by some rusty old black bonnet of the dreadful type usually worn by low comedians in pantomime. But in the village street, or on the farms, when without their appalling state bonnets, half a dozen of them walking along glitter in the sunlight like a squadron of Household Cavalry; and if you see in the distance on the farms some flashing point of light in the sun like a heliograph at work, be very sure that it is not military signalling: only someone wearing a golden helmet, and catching the sun's rays.

Just as there is nothing outside of England to compare with the winding English roads and luxuriant hedges, so there is not anywhere else than in Friesland any kind of farm building quite like the farmsteads in that part of the Netherlands. The Saxon "halle" type of farmhouse is, however, a distant cousin to them.

I say "the Netherlands" advisedly, not "Holland," because although Friesland is a province of the kingdom of Holland, and not easily to be distinguished by the stranger from the rest of that country, yet the Dutchman who is a Friesian will not style himself a "Hollander," and when he leaves his northern province (or his "country," as with a particularist patriotism he would style it) for the south, he speaks of "going into Holland." Even so, a Welshman, and some Cornishmen, travelling from their own parts, will be "going into England."

Thus we see that the Friesians are a people. They have a language of their own—"Freisch"—and customs, and a sturdy independence; the heritage of olden times. For "Friesland" means "Free-land." It follows then that Friesland, which is that part of the Netherlands extending north-east from the northern shores of the

Zuyder Zee to the borders of Hanover in Germany, must have many individual features. Chief among these, to the eye of the traveller, is the characteristic "boerderij," or farmhouse. Even the least observant person cannot fail to be impressed immediately with the "haystack house," which is the essential shape of the Friesian farmhouse. The absolutely flat and sparse y-wooded character of the landscape itself lends an extraordinary prominence to these buildings of so peculiar a plan and elevation. They are, in their general lines, all alike, differing only in size and some not very important details.

This is a vast pasture land of dairy farms, peopled with farmers, and unmingled with other industries; and the dyke-divided meadows are teeming with cattle of the famous black-and-white Friesian breed. Few things are more certain than that in this land, coming past the many little wayside inns, you will see frequently the signs of the "Bonte Koe" or the "Bonte Os," which mean the "Spotted Cow" or the "Spotted Ox"; so intent always are the folk of these parts upon this, their chief interest.

And few other things are more sure than that ever and again you will come to Friesland mere: one of those widespreading navigable lakes that give so toast-and-watery an aspect to the country. Beside one of these stands Grouw, with its huge saddle-backed church tower.

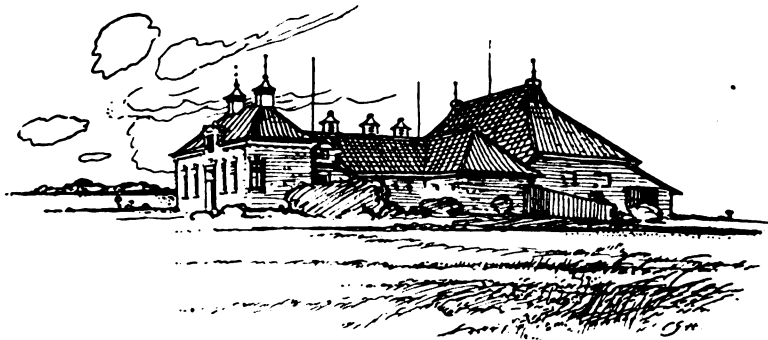
The Friesian farmhouse merits some detailed notes. Its general haystack or great barn-like outline is the outward and distant sign of a singular internal economy: of an ordered and all-comprising logical arrangement evolved in centuries of experience. The ideal is to have everything contained under one roof. Thus, the ground-plan consists of a fore-building which is the farmer's dwelling-place, with drawing-room and living-room on either side of the front door, and bedroom and kitchen behind. Between these runs a passage conducting directly to the cow-stalls. In these stalls in a double row stand the cattle when not in the meadows, their heads toward the outer walls, and in most farmhouses there is a window to each animal. Nothing in this neat and housewifely



GROUW.

country is more amusing than to see that to each window is generally a little linen blind, daintily finished off with a lace border. The cows usually, in this land where corn is not much grown and straw is therefore scarce, lie without straw bedding, on brick floors, somewhat hollowed to their shape. They are used to it, just as the Japanese people are so accustomed to wooden blocks for their heads instead of pillows, that they feel no discomfort, and just, presumably, as the criminal gets used in a long term of imprisonment to his plank bed.

From the cow-stalls a passage conducts directly into the great hay-barn. Hay is always stored there under roofs instead of in stacks in the open. Within the wide overspreading roof of this barn are located a so the many incidental items of the farming business: carts, ploughs, harrows, etc. The Friesland farm has nothing in the



SIRTEMA STATE.

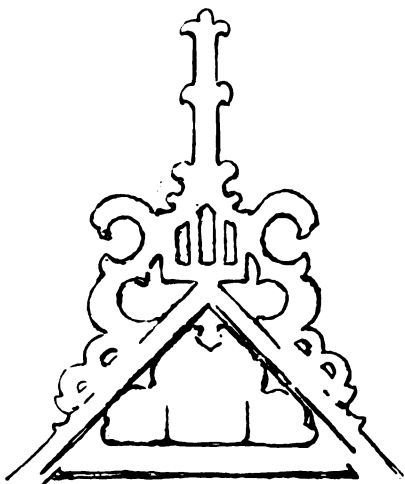
nature of a muddy farmyard such as in France and England, where the manure lies in heaps and the farmer and his hands go squashing about in filth. Every little detail of practical cleanliness is thought out here. The brick flooring, for instance, of the cow-stalls is laid sloping to a central gutter, and in the constant washing which is a feature in all the Netherlands, in every department of life, the farm manure is reduced to a liquid state and stored in tanks, and in that condition is afterwards distributed over the fields.

This peculiar type of farming economy is derived from the necessities of the country; a land where the winters are long and severe, where it is not possible in those months to adventure much out of doors. Each homestead is then like a besieged fortress, and, equally with fortresses expecting to be beleaguered, they are all well provisioned against the enemy. There is very little going on out of doors at this season, except it be for the favourite Dutch sport of skating.

In most of these farmhouses the farm hands sleep in the cowshed, and in the smaller and older ones the farmer and his family may still, as in a more simple generation frequently they did, use one end of it as a sitting-room. So, to the Dutch painters of old to represent the Holy Family in a stable or cow-stall, following the lines of Scripture, seemed an ordinary domestic interior.

This practice would nowadays be unthinkable in the conduct of farms in other countries, but in the Netherlands it is not so remarkable, having regard to the extraordinary neatness and cleanliness prevailing. Not infrequently, indeed, ailing and tuberculous children are sent into the country from towns to live in the cow-stalls of these wonderful farms, and so gain health by inhaling the sweet breath of the cows and partaking of the generally fragrant warmth of these interiors.

The eaves of the typical barn and cow-stall roofs come down to within some seven or eight feet from the ground. They are thatched roofs, generally of reed, and the thatch usually comes down to about two or three feet of the eaves, the intervening space being covered with pantiles.



FINIAL TO FARM ROOF.

This is not so much a fashion as a plan in connection with catching the rain water. The roofs being of so great an area and so steep a pitch, a large quantity of water is thus gathered and very quickly thrown off at each shower, and it is greatly prized and conserved, for in the Netherlands generally, and in Friesland in particular, although the country is so waterlogged, drinking water is scarce, and rain water is commonly used for domestic purposes. There are few wells or streams, and outside the towns scarcely ever a water supply. Reeds for thatching do not, as a rule, come from the dykes and canals which are



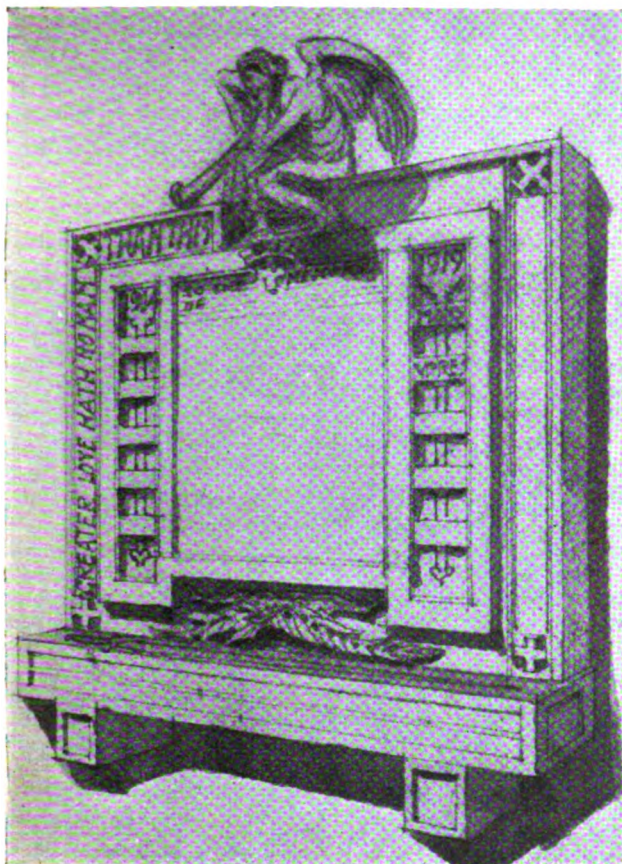
WASHING IN THE MOAT.

plentiful around the farming districts, but from reed farms.

Just as the type of roof is so little varied, so also are the gable ends, always finished off with an ornamental finial in wood, generally with a "swan-neck" motif, and not uncommonly with the swans' heads duly outlined and painted with eyes as well. The subsidiary details of the decoration exhibit more freedom and individuality, but they do not alter the general effect.

As you go south the thatch becomes more ornate, and is cut into patterns, exposing the pantiles beneath. Around Hoorn and Enkhuizen the farmhouses have a general effect of greater elaboration than farther north, which may or may not mean a greater prosperity.

(To be concluded.)



War Memorial Tablet, Leytonstone.

This mural tablet is erected in St. George's Presbyterian Church, Leytonstone, to the memory of the fallen. The sculptured figure is intended to represent the angel of the resurrection.

The monument was designed by J. Andrew Minty. Mr. Charles Pibworth was the sculptor and Mr. Walter Tomes the mason.

"The Architect" Fifty Years Ago.

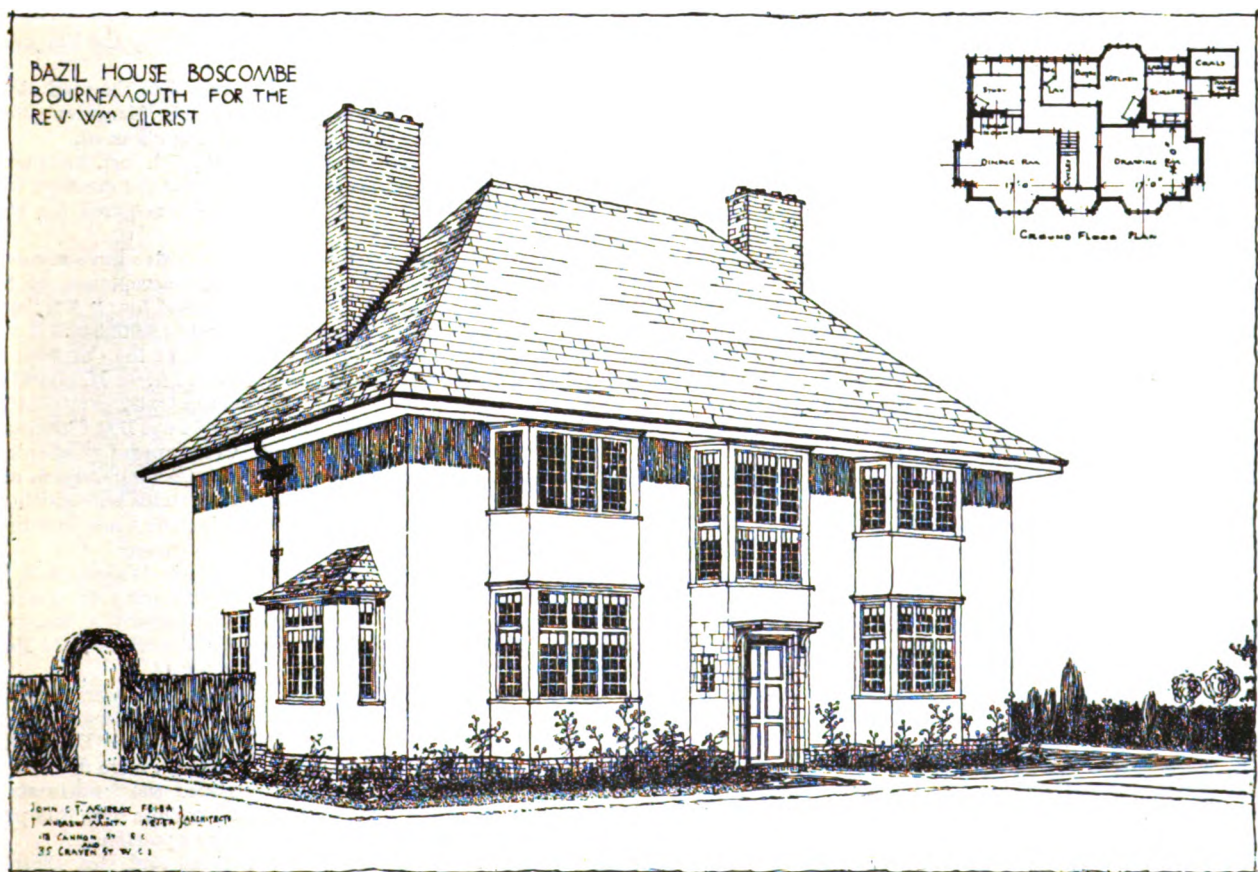
SEPTEMBER 21, 1872.

SCHOOL BOARD FOR LONDON.

The following architects have accepted the invitation of the Board to compete for the new offices on the Thames Embankment—Mr. G. F. Bodley, Mr. A. W. Blomfield, Mr. John O. Scott, and Sir M. Digby Wyatt. The unsuccessful competitors will each receive a honorarium of twenty-five guineas.

A seven-storey building in Clyde Street, Glasgow, occupied by Messrs. Falk, Stadelmann & Co., makers of "Veritas" gas mantles and other fittings, was gutted by a fire last week. The damage is estimated at between £40,000 and £50,000. The blaze started in the basement, and in two hours it was an empty shell. A detachment of the Fire Brigade working at the rear were trapped inside the building. A superintendent and another fireman, and two employes, were removed to the infirmary.

A letter from the Ministry of Health to Hemsworth Urban Council points out that local authorities may undertake schemes for the housing of the working classes independently of State assistance, and suggests that, having regard to the material reduction in prices, the Council should consider the question of undertaking such a scheme if they are satisfied that there is still need for further houses in their district. The Minister would be prepared to entertain an application for a loan for the purpose.



BAZIL HOUSE, BOSCOMBE, BOURNEMOUTH.

This house is being erected on a fine open site in Beechwood Avenue, Boscombe, for the Rev. Wm. Gilchrist. The walls are being built hollow and finished with rough-cast; the roofs are to be covered with stout slates.

The plinth, chimneystacks and inside face of porch are faced

with Lawrence's purple bricks. The fireplaces and hearths of the principal rooms are formed with similar two-inch bricks.

Messrs. F. A. Grigg & Son are the general contractors, and Messrs. John C. T. Murray and J. Andrew Minty the architects.

The Cost of House Building.

The General Committee of the National Federation of House Builders desires, by means of the following manifesto, to draw public attention to the cost of erection of houses in view of the great prominence which has been given by the Ministry of Health and the Director-General of Housing to the contracts recently placed for houses by certain local authorities at remarkably low figures.

The Committee welcomes the fact that a considerable drop in costs has taken place during the past year, but regrets that the reduction in the cost of building villa property does not correspond with the figures published by the Director-General of Housing.

Any comparison between the cost of a "council" house and that of a house erected to be sold to an occupying owner is impossible, for the one is a mass-production article, with every little embellishment ruthlessly cut away, and the other has the individuality, the comforts and conveniences of a home.

In order to form a just estimate of the cost of building, even of Government houses, the following matters should be observed; they have been overlooked in the statements by the Government:—

1. The Government "£300" house does not include the cost of land, roads nor sewers.
2. The accommodation is inferior, and the specification does not conform to the acknowledged standard of requirements in many respects.
3. The price of at least one of the advertised schemes is lower than any builder of experience could possibly quote, and thus the figure announced by the Ministry is no guide to the cost of building.

The Committee of the Federation desire to draw attention to the following facts:—

The statements reported to have been made by Sir Charles Ruthen that the cost of building is now 60 to 70 per cent. above pre-war is inaccurate and misleading.

The cost of building at the present time varies in different parts of the country, but on the average it may be said to be 125 per cent. above the cost of 1914. The following are the detailed general prices of certain materials and wages at the present date with those prevailing in 1914:—

| | 1914. | | | 1922. | | | increase per cent. |
|-------------------------------|-------|----|----|-------|----|----|-----------------------|
| | £ | s. | d. | £ | s. | d. | |
| Wages, skilled, per hour .. | | 10 | | | 1 | 8 | 118·75 |
| Wages, unskilled, per hour .. | | 6 | | | 1 | 3 | |
| Common bricks, per 1,000 .. | 1 | 4 | 0 | 3 | 1 | 0 | 154·16 |
| Timber, per std. d. .. | 10 | 15 | 0 | 21 | 10 | 0 | 100·00 |
| Cement, per ton .. | 1 | 10 | 0 | 3 | 10 | 0 | 133·33 |
| Roof tiles, per 1,000 .. | 1 | 13 | 0 | 4 | 5 | 0 | 157·57 |
| Baths, each .. | 2 | 10 | 0 | 5 | 10 | 0 | 120·00 |
| Glass, per foot .. | | | 2 | | | 4 | 100·00 |
| Doors, each .. | | 6 | 0 | | 15 | 0 | 150·00 |
| Plaster laths, per bundle .. | | 10 | | | 2 | 9 | 230·00 |

It is impossible to state any general figure of cost for a house of given accommodation built for sale to an occupying owner, the cost of houses, even of the same size in the same town, varies, for the value of the land, the nature of the fittings, and the design of the house all have a direct effect upon the cost of building.

The prospect of any further substantial reduction is remote for wages are now fixed until March 1, 1922, and the item of wages amounts to 75 per cent. of the total cost of building, including the wage on the manufacture of material used in the job. There is little prospect of any great fall in the rate of wages, which is governed by the final law of supply and demand. There are probably only half the number of men available for house building in the immediate future as compared with the number who were engaged in the various trades when building was at its height, and any revival in the trade is bound to lead to a very serious shortage of labour, which will prevent any further reduction in the rate of wages. It is more than probable that the cost of housing will become stabilised for some years at a little above double pre-war figures.

The house builders of the country have been prevented by various circumstances from carrying on their business during the past ten years. Investors have been discouraged from buying houses by the various Acts of Parliament affecting house property which have destroyed all confidence. Prices have been rushed up to impossible figures by reckless schemes, and the people of the country have been encouraged to expect housing conditions which were absolutely unattainable. When all this chaos has subsided and the country realises that housing must be an economic business governed by hard financial rules, the house builders will be able to resume their business and the acute house famine which we are now experiencing will become a nightmare of the past.

Competition News.

The War Memorial Committee for the County Borough of Birkenhead invite designs for a Memorial at a cost not exceeding £4,000. Open to Architects and Sculptors in Birkenhead, Liverpool, and Chester only. A premium of seventy-five guineas is offered. The Assessor appointed is Major Gilbert Fraser, M.C., F.R.I.B.A. Conditions and plan of site may be obtained on application to the Town Clerk, Birkenhead.

Exhibition of Contemporary British Architecture.

Before forwarding their drawings and photographs to the R.I.B.A., intending exhibitors are requested to apply to the Secretary, R.I.B.A., for a copy of a printed form, which they are asked to complete and enclose with their exhibits. The official arrangements for the organisation of this exhibition were given in our issue of September 15.

Town Planning Tour of Paris.

In connection with the conference of the International Garden Cities and Town Planning Association to take place in Paris on October 21 at L'Institut d'Histoire de Géographie et d'Economie Urbaines, a series of short tours is being arranged.

The municipal housing schemes in Paris will be visited as well as the Cites Jardins in the Department of the Seine, showing the new housing movement in France. The historical development of Paris will be studied and the achievements in town planning from the time of Hausmann. There will also be tours to Versailles and Chartres.

The whole visit will last from Friday, October 20, to Saturday, October 28, and the inclusive charge from London, including all fares, hotel, etc., is £14 10s.

Particulars may be obtained from the Organising Secretary, International Garden Cities and Town Planning Association, 3 Gray's Inn Place, London, W.C.1.

General.

The Housing Committee of Dudley Town Council have decided to provide 24 more houses on the Red Hill site.

Mr. George Hicks again represents the Building Trade Workers on the new General Council of the Trades Union Congress.

The Shirebrook Colliery Co. are about to erect 50 houses at Shirebrook. The plans were passed last week by the Blackwell Rural District Council.

Dover Corporation have decided to complete the road along the face of the cliffs between the Castle and St. Margaret's Bay, at a cost of £43,000, subject to a grant being obtained.

The Devon Education Committee on the 7th inst. instructed the county architect to prepare a scheme for the erection of a secondary girls' school at Totnes, on a site acquired for that purpose.

The Newport Corporation Housing Committee have received the Ministry of Health's approval of the acceptance of the tender of Messrs. King & Co. for the erection of four "A 2" and 48 "A 3" type houses at Somerton at a cost of £18,348.

The Wolverhampton Housing Committee of the Corporation recommend the acceptance of the tender of Mr. A. M. Griffiths, of Wolverhampton, for the erection on the Oxley estate of 14 houses of Type A at £359 16s. each and 12 of Type B at £380 each.

Paisley Dean of Guild Court last week approved of plans submitted on behalf of Messrs. Pollock & Cochrane, dyers and finishers, Thrusheraig Works, to make alterations and additions to their present premises. The additions include a new building, 95 ft. by 50 ft., to be erected of reinforced concrete.

A lecture on the drawings by Mr. William Walcott, A.R.E., F.R.I.B.A., of the great temples of antiquity and some Roman compositions, which was illustrated by lantern slides, was given by Miss Atkins, at the Architectural Association, 34 Bedford Square, W.C., on Thursday, September 14.

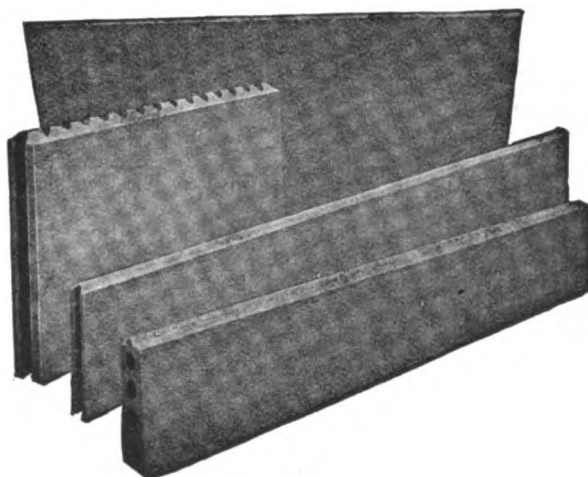
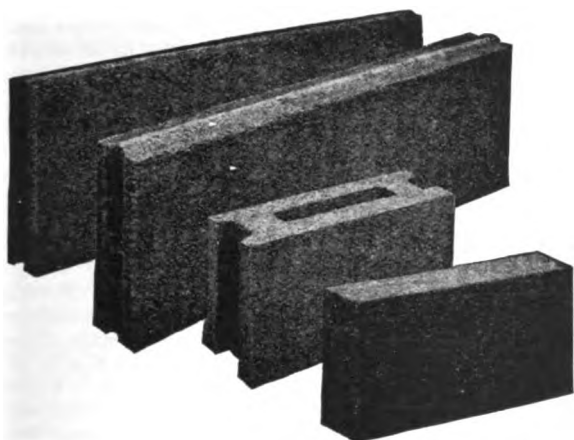
Alderman Theobald, chairman of the Doncaster Housing Committee, recently had an interview with the Minister of Health with respect to the erection of additional houses at Doncaster, and the Council, as the result of the interview, have decided to invite tenders for 80 houses, and, provided the tenders show that the houses can be built to let at an economic rent, it is proposed to proceed with the work as quickly as possible.

The engineer to the Brimingham, Tame and Rea District Drainage Board has lately been experimenting at the Cole Hall Sewage Works with a view to the utilisation of sewage gas for power, and he has succeeded by this means in driving a pump which lifts sewage from the well adjoining the engine-house to the irrigation land. The gas available for driving the engine has varied in amount, but it has been possible to keep the well free of sewage, although a gas-holder for storage purposes had not been erected.

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General.

Mr. Septimus C. Searle, A.R.I.B.A., of St. Margarets-on-Thames and Paternoster House, E.C., died on the 16th inst., aged sixty-eight, after a short illness.

The Ministry of Health has sanctioned an application by the Haddon District Hospital Committee, Bakewell, to erect a large isolation hospital off Monyash Road, Bakewell.

Halifax Housing Committee recommends to the Town Council that they should proceed with Mr. John Carter's scheme for 500 houses, and seek power to borrow £200,000 for the purpose.

Mr. H. V. Lanchester, F.R.I.B.A., President of the Town Planning Institute, has been invited to Zanzibar to advise the Government on town-planning and extending the city of Zanzibar.

The Society of Architects will be officially represented at the International Housing Congress to be held in Rome from September 21 to 26, 1922, by Mr. E. C. P. Monson, F.S.Arc., a Past President of the Society.

The Aberystwyth Town Council last week passed the plans of the proposed hotel to be erected on the site of the burnt-out Waterloo Hotel. The new hotel will be fully licensed and the estimated cost is placed at over £60,000.

At their last week's meeting the Barnsley Town Council decided that application be made for permission to erect an additional 50 houses, and accepted tenders for the building of 20 additional houses at the cost of £348 17s. 6d. each.

The Scarborough Corporation has received sanction from the Ministry of Health to erect 12 additional houses on the Seamer Road estate. The sanction of the Ministry is being sought to the erection of 24 additional houses in Long Westgate.

A site has been recently acquired in Oxford Street, W., facing Marble Arch, for the erection of an hotel to be conducted under the same management as the Strand Palace Hotel. Messrs. J. Lyons & Co., Ltd., propose to build a new "Corner House" adjoining it.

Alderman W. C. Fenton, J.P., F.R.I.B.A., has been invited to become the next Lord Mayor of Sheffield. Mr. Fenton is a Past President of the Sheffield, South Yorkshire and District Society of Architects and Surveyors, of which he was a founder and the first hon. secretary.

Applications for the post of architectural assistant to Messrs. Little, Adams & Wood, of Hong Kong, announced in "The Architect" of August 25 (p. 144) are now being considered. Any further applications should be sent without delay to the Secretary R.I.B.A., 9, Conduit Street, W., from whom full particulars can be obtained.

An oak altar and reredos erected in the side chapel of St. Paul's Church, Sheffield, as a memorial to the late Mr. J. B. Mitchell-Withers, was dedicated by the Bishop of Sheffield on the 6th inst. The design was prepared by Mr. J. R. Wigfull, A.R.I.B.A., who had been closely associated with Mr. Mitchell-Withers from the beginning of their professional life.

Last week, at a meeting of those interested in the Wrexham Infirmary, the proposed new Wrexham and East Denbighshire War Memorial and the William and John Jones Hospital, it was announced that the Charity Commissioners had agreed to the amalgamation of the three trusts. It is proposed to dispose of the present infirmary buildings, and to transfer the patients to a new hospital, to be built at Roseneath, at a cost of £66,000.

Various committees of the Edinburgh Town Council have approved two important slum clearance and reconstruction schemes for Edinburgh—one for the Cowgate and Grassmarket district, and the other for Leith. The reports upon them by the Burgh Engineer and Director of Housing (Mr. A. Horsburgh Campbell), which are of an interim character, show that the Cowgate and Grassmarket scheme would involve an outlay of £200,750, and the Leith scheme an outlay of over £82,400.

The Ministry of Health, who had sanctioned the purchase of the Heys estate at Ashton-under-Lyne for the building of houses by the Ashton Corporation, and then, after the first 30 houses had been erected, ordered that no more should be built, have now agreed to the erection of an additional 60 houses, on the understanding that the Corporation make themselves responsible for the building of 30 of them. It is stated that the houses are to be of "a more acceptable type" for the workers than those already built on the estate.

The Newport Corporation last week considered the contracts for the Talybont water scheme pipe line, and it was decided to accept the tender of the Stanton Iron Works Company, Derby, for contract No. 1, cast-iron pipes at £117,000, and for contract No. 2 (cast-iron pipes) that of Messrs. Cochrane, Middlesbrough, at £101,960, provided they gave Messrs. Jordan, Ltd., and Messrs. Spittle, Ltd., Newport, a tonnage equal to that which those firms tendered for. This policy was adopted in order to provide work for Newport workers.

The Housing Committee of Glasgow Corporation have accepted the following tenders for the erection of 102 houses at Polmadie which are to be built to accommodate residents in a slum area which it is proposed to clear. William Bryce, joiner (£7,704); Thomas Porter & Sons, plumbers and gas-fitters (£8,754); and John Wilson, glazier (£213). The Housing Department will carry out the brick and concrete work, also the slating and plastering, by direct labour, and at an estimated cost of £13,969. The total cost of erection is estimated at £28,640.

The Municipal Council of Sydney, New South Wales, invite application for the position of city surveyor. Applicants must be duly qualified engineers and surveyors, and have a comprehensive knowledge of the duties of city surveyor, including road construction and up-to-date methods of city cleansing, and must have been accustomed to the control and management of a large outdoor staff of foremen and workmen. Salary commencing at the rate of £1,600 per annum. Applications must reach the Town Clerk at Sydney not later than January 31, 1923.

Salford Town Council on the 13th inst. entered into contracts amounting to £113,748 for work in connection with the £750,000 scheme for the erection of a large electricity generating station at Agecroft. The contracts let last week were as follows: Edward Wood and Co., Ltd., Salford (£37,596) for the erection of steel work in connection with the turbine and boiler houses, etc. Sir Robert M'Alpine and Sons, Manchester (£73,632) for the carrying out the necessary excavations, concrete and brickwork; and Marshall, Fleming and Co., Ltd., Motherwell (£2,520) for cranes, etc.

Sir Kingsley Wood, in a statement last week at Bedford, said conditions to-day were much more favourable to a more rapid rate of house-building. It was a remarkable fact that the total number of houses completed last year (some 100,923) actually exceeded by 30,000 the average output of working-class houses by the building industry during the ten years before the war. Output was improving, rings were breaking up, and there was a fall in the price of all the principal materials that went to make up a house. The private builder would soon be finding it profitable and possible to resume house building, especially for the middle classes.

At the annual meeting of the Cambrian Archaeological Association, held at Haverfordwest under the presidency of Sir Evan D. Jones, Bart, M.P., Mr. W. D. Caroe, F.S.A., the architect, drew attention to the demolition of the ancient bridge at Trefgarne, Pembrokeshire, and a resolution was passed protesting against its destruction. In the letter addressed to the County Council it was stated that to rob the county of some of its most valuable ancient examples of bridge building is to take away an asset which can never be replaced, and it was pointed out that ancient bridges can be easily strengthened by a careful system of grouting, as has been used successfully in the bridges of the English Lake district.

The Joint Welfare Committee of the Lancashire and Cheshire coal industry met in Manchester on the 18th inst. to consider schemes for the application of the Welfare Fund built up under the terms of the last wages settlement, by which one penny on each ton of coal raised in the two counties is to be devoted to social welfare work. A proposal for the erection of a convalescent home at Blackpool was put forward, and after a brief discussion the Committee unanimously decided "that the whole of the fund should be devoted to the establishment and endowment of a convalescent home for the benefit of the workers in the mining industry of Lancashire and Cheshire." A sub-committee was appointed to prepare the scheme. It is expected that a sum of £400,000 will be absorbed by the scheme.

The Central Committee in London of the Miners' Welfare Fund has approved of ten schemes submitted to them under the Lanarkshire District Committee, involving a total outlay of £23,725. The schemes are:—Stoneyburn, an institute; Loganlea, a hut; Woodmuir, a grant in aid of furnishing a library (these three schemes apply to employees of the United Collieries (Ltd.), in Lanarkshire); Salsburgh, extension of present public library; Shotts, swimming pond and baths; Dalserf (Swinhill), a hall; Stonehouse, an institute; Cleland, an institute, including reading and recreation rooms and baths; Hart-hill, extension of Baillie Institute; and Auchengeoch, institute with recreation rooms and cinematographic apparatus. Instructions have been forwarded to the local committees to carry out the necessary preliminaries as to sites, plans and initial work.

Trade Notes.

Messrs. D. Anderson & Son, Ltd., of Manchester, London and Belfast, makers of the "Belfast" Roofs, Roofing Felts, and "Sidel" Wood Preservative, have established their administrative headquarters at Park Road Works, Stretford, Manchester, where all correspondence should be addressed.

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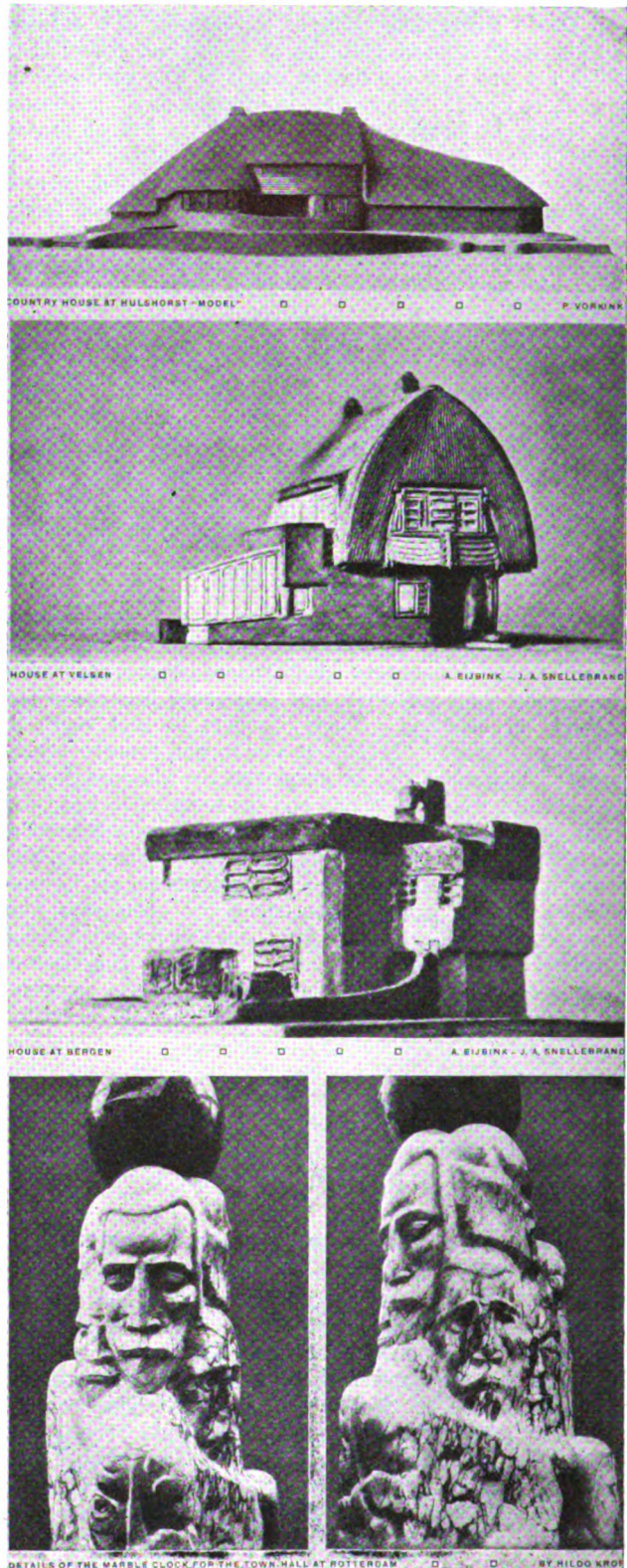
Architectural Madness.

From the pages of "Wendingen," a Dutch illustrated journal dealing with architecture and other arts, we give four typical illustrations. We are used in this country to occasional architectural aberrations, but by comparison with them the work shown might be that of raving madmen. The three houses illustrated are photographed from models, but after making all allowance for the limitations set by the use of such a material as clay, it is almost impossible to believe that the work shown is the product of sane minds. Love of picturesque effects has frequently produced in architects a desire to force them unduly; here the forms shown can hardly be described as possessing the quality of picturesqueness, but are weird and unmeaning. They form an architectural parallel to the work of the Cubists in painting, and we should need a mental kink to understand them.

In the work of past ages, which possesses the quality of picturesqueness in the fullest degree, what we most admire to-day is frequently the result of chance and time—time which has mellowed and softened forms, distorting lines, and chance, which so frequently has given a background and setting which adds vividness to æsthetic effects. Many buildings of the time of Elizabeth and James I. must have originally looked crude and hard, but softened in the lapse of years became delightful. The half-timber work of Shropshire and the northern counties, where it has come down to us, probably looks better than it did centuries ago when first erected, when its angularity and staring contrasts of colour must have often been unpleasantly marked, while the effect of many a cottage has been almost wholly the result of time and decay.

Evidences of individual craftsmanship naturally add interest to the work of the past, and the difficulties of our forefathers in dealing with material help to produce interest which seems often wanting in modern building produced in a shorter time with incomparably greater ease. But if we judge the work of the past logically we shall usually see that it was as simple and direct an expression of the wants of past generations as the most prosaic buildings of to-day, its merit being due to the fact that the labour and material had to be more carefully economised than is the case in an age of machines, when it is easy to dispense with effort and when "ornament" is manufactured by the yard. Building, judged not by standards of pounds, shillings and pence, but by that of relative wealth and means, was more costly than it is to-day, and far more slowly produced. If there is any motive underlying the work we illustrate it is the desire to compass picturesquely unusual effect and to create at once something which will have the effect on us which the work of the past has; but it is surely futile to attempt to rival what has mainly been the outcome of the slow processes of ages, and the outcome of a system of production which has died out in the greater part of the civilised world. We have certain architectural forms and elements the gradual change and development which we have some knowledge of, but of the

first origin of which we know nothing. But we do know that, so far as we can trace, no one has ever succeeded in inventing original architectural forms which commend themselves to our reason, while each of us may unconsciously carry the existing develop-



ments a little farther. These weird people in architecture, as in other branches of art, are attempting what is probably little more possible than the creation of life—the invention of new forms. If anything, the weirdness of *L'Art Nouveau* has more rhyme and reason underlying it than the emanations which

seem to find some favour in Teutonic and Scandinavian Europe. It is to be hoped that the students of the Architectural Association who are now on a visit in Holland will not be inoculated there with the virus of architectural Bolshevism which the pages of "Wendigen" give samples of.

Our Illustrations.

STEEPLE MANOR, DORSET. BRIANT A. POULTER, Architect.
WAR MEMORIAL AT BOSHAM. IMRIE & ANGEL, Architects.
WINCHESTER COLLEGE.

Notes and Comments.

British Art Supreme.

Sir David Murray, speaking at the opening of a Jubilee Autumn Exhibition of Painting at Liverpool, stated that British art was now the first in merit of any produced in the modern world. We assume in pronouncing this dictum that Sir David Murray was speaking of the branch of Art which he specially represents, as we are afraid that we cannot agree with him as far as the arts of Architecture and Sculpture are concerned. It is true that critics are fairly unanimous in agreeing that French architecture has lost its pre-eminence, but we feel that the first position has been gained by the Americans rather than by our own people, and that the average level of architecture in America is above that of this country. In the domain of sculpture it seems to us that we have, if we may judge from the work shown in recent exhibitions, rather retrograded than advanced, and we should be inclined to think that in this field of Art the work of France still stands first in merit and importance. It is, and always has been, an art which has had a greater appeal to Latin nations than it has to us, and this fact is brought home to us by almost everything we see around us.

The Foolish Critic.

The "Liverpool Courier" contains a letter from a correspondent who abuses sash windows as being inconvenient and dangerous: inconvenient because sash cords occasionally want renewing, and dangerous because of the difficulty of cleaning. These dangers do not exist in buildings of ordinary height, and as is well known, a very simple arrangement can be employed by which each sash can be swung round on pivots and the outside cleaned from within the room. Some people will never be satisfied unless they get a building which is foolproof and everlasting, and regard it as reasonable that such buildings should be provided at bargain prices. Our friend the critic says how convenient French casements are; if a new hinge is needed it can be provided for a penny! He shows the class of building he is used to by this little suggestion of cost: personally we should be inclined to think that the provision of penny hinges would have to be frequent. He complains about steep slate roofs as a cause of trouble, but is probably unaware of the existence of the law of ancient lights and many other causes which largely determine building forms. However, the critic will find that a large number of people like sash windows for their convenience and would object to any other form.

The Late Señor Aureliano de Bernete.

The first volume by the late Señor Aureliano de Beruete, Director of the Prado Museum, whose death last summer was referred to in these columns, of his series of three successive volumes on the works of the Spanish painter, Goya, has now appeared in English, having been translated from the Spanish by Mr. Selwyn Brinton. This volume, which has been published by Messrs. Constable, treats only of this artist's portrait work, and contains a list of authentic portraits compiled by the late Director of the Prado, with numerous colotype illustrations; the later volumes deal with Goya as a decorative artist and as an engraver.

Housing in Manchester.

The Trades and Labour Councils of Manchester and Salford are going to consider a scheme whereby as many of their members as possible should form themselves into a building society to promote the erection of a colony of houses; the members providing the first instalment of the cost. The Ministry of Health encourages the scheme, and will be willing to provide two-thirds of the capital at a low rate of interest, and the officials of the Councils have before them an offer of an insurance company to provide two-thirds of the money required if an insurance is effected on the life of the purchasers at a rate of 4½ per cent. The scheme advocated by the Building Guild has also many supporters, and no doubt if through these or other agencies housing in Manchester receives a great stimulus the example set will be followed elsewhere. Nothing but commendation can be given to such methods of meeting the difficulty, but we hope that the insurance company's offer or that of the Building Guild will be favoured in preference to the Ministry of Health, with its inevitable accompaniment of red tape and administrative delays.

Housing Shortage.

Mr. P. Wilson Raffan, M.P., addressing the members of the City Business Club, Glasgow, advocated the adoption of a scheme similar to that which was in vogue in New York, where, under a State Law passed in 1920, New York City had decided to exempt all new houses erected before April 1, 1923, from local taxation for a period of ten years. The result of the operation of this scheme had enormously accelerated the building of new houses, plans having been passed for no fewer than 50,000 new dwellings in the first year of the operation of the measure. Provision was thus made for the housing of 250,000 people. The erection of new houses in New York alone was as large as in the whole of Great Britain on an average in each of the past four years. Mr. Raffan desired to make it clear that in his view the New York plan could only be adopted in this country if accompanied by a scheme of rating reform. In New York, he explained, land and buildings were assessed separately, and while the new houses were exempt, the sites upon which they were erected had to bear their full share of local taxation. It was his contention that the scheme of subsidy introduced by the British Government had absolutely broken down. It involved an enormous cost to the taxpayer, but it did not provide anything like the number of houses necessary to meet the existing shortage. On the other hand, the withdrawal of the subsidy equally failed to induce private builders to come forward to attempt to deal with the position under the prevailing conditions. It was, therefore, essential that the question should be viewed from a new angle. An effort should be made to start on new lines.

We believe with Mr. Raffan that some such measures as those he advocates would be of very great use in this country in expediting the erection of new houses. Our rating authorities are, however, moving in the opposite direction—that of attempting the increase of existing rates.

London Art Galleries.

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This period of the early autumn or late summer is traditionally devoted to the exhibitions of the more important Photographic Societies, as a sort of preliminary skirmish to the more serious attack of the autumn exhibitions. Perhaps, however, the last remark is putting the work of these Societies too low, for photography, in its artistic as well as its technical development, is claiming every year a more important place.

Following the International Exhibition of the London Salon of Photography, which I took last week, the Royal Photographic Society of Great Britain opened its sixty-seventh annual exhibition on September 18, in the Galleries of that Society, at 35 Russell Square, a display which will remain open till October 28, and is accompanied by an attractive programme of lantern lectures. I notice among these, as likely to interest my readers, on Tuesday, October 3, lantern lecture on "Lourdes," by T. H. B. Scott, F.R.P.S.; and on Friday, October 6, lantern lecture on "The Beginnings of London," by Frank Lambert, M.A., F.S.A.; while on Friday next, September 29, there will be a Lantern Slide Night, with selected slides shown on the screen: the time of these lantern lectures is in every case 8 p.m.

The two sections into which the present exhibition is divided are: (1) Pictorial Prints, and (2) Pictorial Lantern Slides and Colour Transparencies and Prints; and the pictorial photography, which we find on the first floor, contains some very attractive camera work. Comparing it with the "London Salon" it seemed to me that the landscape work here is especially interesting. The prints are so numerous that it is difficult not to omit some work of merit; but I noticed especially "Rouen," Frank Read, F.R.P.S. (bromoil treatment); "Nature's Spires," Dr. R. S. Lovejoy (gum); "The Lake below the Hill," F. O. Libby (gum); "Reflections," N. P. Moerdyke; and "Floating Mists," Alfred Brinkler (both these last multiple gum). All these are on the two first walls as we enter, where are also a good portrait, "Miss C," by H. van Wadenoyen, jun., F.R.P.S.; and a clever character study "Unseemly Mirth" (bromide process), by D. and R. Morter. On the next wall Marcus Adams, F.R.P.S., is peculiarly happy in his studies of child life, and the beautiful children he has for sitters, in such prints as "Love Sisters," "Tranquillity," and "Zara the Piper," and in his child portraits of Patricia Mary Hastings and a son of F. S. Loveday; and in the same class of subject comes Angus Basil's "Young Dancers," and A. C. Jacob's "David."

The figure studies are not numerous, but well posed and placed in relation to the background, that of "La Sirene" (Kodura process)—a nude flute-player (or rather a pan-pipes instrumentalist) standing beneath a classic portico—being entirely appropriate in treatment. This clever print is by Louis J. Steele, and a very similar pose, the figure supported against a column, is seen in Bertram Park's "Study," here again a female figure, while his "Athlete" shows a nude male figure throwing or running (for both movements are suggested) and is to be compared with the admirable male torso shown by Nicholas Murray in the London Salon of Photography. In figure work as well as landscape Dr. Lovejoy is an exhibitor, using here again the gum process to good effect; and an excellent series of male portraits are those by Pirie Macdonald, on the last wall, of "Frank Lawrence," "The Archbishop of York," and "Dr. Crane," besides J. Vander Pant's powerful bust portrait called "Man." Returning now to the landscapes I cannot pass without mention "The Face of the Down" and "Evening on the Arun," by Bertram Cox, F.R.P.S., as well as this artist's "Arun Meadows," and again "The Plains of Adelaide," by A. Wilkinson, and H. W. Bennett's finely composed bromide print of "Durham Cathedral," seen emergent above the roofs and smoke of the old town. Visitors to this exhibition, which is free to the public,

should not omit the colour transparencies on the floor above, some of the flowers shown—"Irises" and "Azaleas"—being very successful with the autochrome and Paget processes.

I am pleased to see a matter of national interest, which I have brought forward more than once in these columns, has been touched upon in recent issues of that clever American art journal, "The American Art News," in speaking of the recent acquisition by Mr. Henry E. Huntington of Gainsborough's "Cottage Door," which that collector has purchased from the Duke of Westminster's collection, following earlier acquisitions of "The Blue Boy" and "The Tragic Muse," which in like manner crossed the Atlantic. The matter of taking some effective steps to prevent our country being denuded of its finest masterpieces was brought forward in the House of Commons by Sir Philip Sassoon in connection with the above-mentioned transaction; and elicited from Sir Robert Horne the reply that Parliament should be ready to vote the funds needed to safeguard such works, and Government to make a grant when the proper time arrived. "This is the first time," says the American art journal, "that any spokesman for the Government has been in agreement with the numerous suggestions made in Parliament on this subject"; though it adds elsewhere that in a sense this is an attempt to lock the stable door after the horse has disappeared—though kindly admitting that there are still treasures enough left in England to make such action pertinent—and very justly goes on to say that if it were merely a case of the British Government bidding against American collectors, who have long purses and stubborn wills, the result might amount to very little, but that if Parliament should enact a law giving Government power to declare works of art national treasures, and fix a price at which they should be sold to the country, it would be very different. I believe myself that here is a "via media" to be found between this extreme course, which does not quite ensure fair play to the owner, and the present denuding of our great paintings of the British School (and it is for these, which are part of our heritage as a nation, that I am pleading here); and which even cultured and thoughtful Americans themselves see with regret, as I know from remarks which have been made to me in connection with the now departed "Blue Boy" of the same artist. "The Cottage Door" is destined, I believe, for Mr. Huntington's California home.

The autumn season for art exhibitions is now upon us, and will commence at the Leicester Galleries with a triple display, of etchings of the statesmen who took part in the Washington Conference, including also portraits of several well-known authors and men of science, by Mr. Walter Tittle. Among the last-mentioned will appear Mr. A. S. M. Hutchinson, Mr. Drinkwater, Mr. Conrad, Sir Rider Haggard, Sir Hall Caine, and Sir Oliver Lodge. There will be a second exhibition of oil paintings by M. Simon Bussy of animals and birds, and a collection of landscape paintings by M. Lucien Pissarro. The exhibition at the Fine Art Gallery of Messrs. Bromhead Cutts & Co., in Cork Street, of the sculpture of Mr. F. La Monaca, which has been already referred to in these columns, will open early in October. I understand that the introduction to the catalogue of this exhibition will be written by Mr. T. P. O'Connor, who will describe some of his own experiences as a sitter.

A number of paintings exhibited in the Venice International Exhibition have been acquired by H.M. the King of Italy for his own private collection, or to be presented by him to the International Gallery of Modern Art at Venice. The acquisitions include works by the Italian Ferruccio Scattola, the French artist Emile Bernard, the Spanish José Benliure, and our own compatriot, J. Kerr Lawson, whose "Fondak," a Moorish scene, has been acquired by His Majesty. The notice of the exhibition which appeared in "The Architect" has been highly appreciated at Venice, and has been referred to, with those of the "Graphic," "Connoisseur," and "Studio," in the "Gazzetta di Venezia" of September 14.

S. B.

Modern Methods in Building Construction.—XXXIV.

By Albert Lakeman, M.S.A., M.C.I.

SUPERSTRUCTURE FRAME.

The main framework for the superstructure in a large scheme is the principal item in the construction, and it is therefore of more importance than any other section of the work. It is not always the most difficult, as the risk of unforeseen conditions that will be present in work underground need not be feared, and generally speaking the operations will be straightforward and can be planned on definite lines without the possibility of special circumstances arising.

In old-fashioned work the structure was generally built up from the foundations as a structure wherein the walls constituted a bearing for the upright carrying members, and these members could not therefore be erected until the walls had reached certain levels. In modern work, however, the principle generally followed is that of erecting a constructional framework for the support of all the loads, and the walls constitute a filling to enclose the structure and keep out the weather. This modern method has several advantages, among which are (1) the dead load on the foundations is reduced; (2) heavier loads can be supported; (3) the trades engaged in the erection of the framework can proceed uninterruptedly with their section of the work; (4) the work can be executed more quickly, as when the frame is up other trades can work at different levels with ease; and (5) it is economical for multi-storey buildings. The type of construction used for the framework is practically limited to two—viz., steelwork and reinforced concrete, of which the latter is the more recent type. Any comparison of the merits of the two types is extremely difficult, as cases which are absolutely parallel for the purpose of comparison cannot be found, and there is considerable difference of opinion among engineers as to cost, speed, and other factors which must be taken into account. Generally speaking, a specialist in steel construction will be emphatic in his opinion that steel is preferable to reinforced concrete from practically every aspect, while the reinforced concrete specialist will be equally emphatic on the merits of concrete as the structural material for the framework. It can be stated at the outset that the questions of speed and cost are likely to be influenced by the methods adopted in the application of the material selected, and whereas on one scheme a cheap and quick job will result from the use of steelwork, on another the reverse may follow, not through the adoption of the material, but through unsatisfactory methods in the application of this material.

The subject of comparison is, however, an interesting one, and in spite of the risk of arousing criticism the author will attempt to give some particulars on a comparative basis as a guide to the value of the modern development of framework construction.

In order to present this comparison the points considered can be dealt with under the headings of (a) speed, (b) cost, (c) durability, (d) adaptability, (e) fire resistance, and (f) appearance.

In a well-organised scheme considerable speed can be attained with either material when the material has been delivered to the site, and many examples can be put forward to substantiate a claim for speed in both types. It is, however, not sufficient to start from this basis, as the time required for the execution must be taken from the commencement of the contract, and it is here that the advantage will be with the reinforced concrete. When the work is commenced the orders for plain steel rods, cement and coarse and fine aggregate can be placed and delivery can be ensured under ordinary conditions by the time the foundations are ready to receive the superstructure, and in fact these materials, together with the timber for formwork, can usually be obtained some time before they are required for use, and the contractor is therefore in the position of being able to control the speed without being dependent on work outside the building site. This is not the case with a steel framework. As the material will require preparation, and part fabrication at the works of the steel contractor before delivery can be made, and owing to the large amount

of shopwork that invariably has to be undertaken, the foundations are likely to be executed and waiting before the first tier of stanchions are available. It is, of course, possible to get a quick delivery of the steelwork, but there is an element of uncertainty as far as the general contractor is concerned, and he is unable to control the speed in the shops to suit the progress he may achieve on the site. The steel contractor may have several important contracts in hand, and the whole of the machines and labour cannot therefore be devoted to one scheme alone, and once the order has been secured the works will endeavour to satisfy the needs of the contractor, but only when this can be done without sacrificing other contracts. On a large and important munition factory in the Midlands during the war, early in 1916, some of the framework was in reinforced concrete and the remainder in steel, the proportions being about equal, and it is interesting to note that the first material delivered to the site was a consignment of reinforcing rods. Every effort was made to get quick delivery of the structural steelwork, and expediting was carried on continuously, while no expediting had to be done for any of the reinforced concrete materials. In spite of this fact the reinforced concrete frame was erected and the formwork removed, and the portion of the factory finished, before the whole of the structural steel was delivered, and the comparison of speed was all in favour of the concrete construction. The trouble with the steel was due to two causes: (1) the difficulty of getting delivery of the required sections and plates from the rolling mills, and (2) the large amount of shop work that had to be done by the steel contractors who were busy on other orders of equal importance, thus preventing the maximum speed on any one scheme. This is not an isolated case, but is given as a typical example to show the advantage of reinforced concrete construction from the point of view of delivery of materials. When the whole of the materials are on the site the steel construction should proceed more quickly, and once the steel is erected there is no waiting period before loads can be applied such as must occur with concrete owing to the necessity of hardening off. During the war some wonderful examples of speed in construction was accomplished, but although these are interesting as indicating what is possible they do not form a really reliable guide of the speed on ordinary construction under normal conditions when the contractor must rely on his own efforts and influence to carry out rapid work. In the experience of the author the speed record in reinforced concrete is better than that held by steel construction, even when the work has been done under one contractor who has endeavoured to speed up all sections of the work.

The best example of speed in concrete construction that has come under the direct notice of the author is worthy of a short description, as it is possibly a record for work carried out under normal conditions.

The scheme under execution was a large one and the work was commenced in 1920, the site being in America, and the organisation comprised both Americans and Britishers. Part of the buildings were constructed with steel frames and others were partly steel and reinforced concrete. A large warehouse, however, which is 546 feet long, 162 feet wide, and four storeys high was designed entirely in reinforced concrete. The total floor area is 353,800 square feet and the constructional frame, floors and walls were all constructed with the same material, the total amount of concrete necessary being over 16,000 yards cube. The excavation for the foundations was commenced on June 3 and the first concrete placed on June 5. On July 30 the roof slab was completed and the parapets and bulkheads over the staircases and lifts were finished on August 4. During this period there were four Sundays on which no work was done and four wet days on which so little work was done that it was not noted on the official records. Deducting these days leaves but 55 days on which work was done from the commencement of the excavation to the placing of the last concrete on the parapets, and practically

all the work was accomplished by the regular day shift, as no attempt was made to break any records but merely carry out the work in the minimum time consistent with efficiency. The only overtime was that necessary in finishing off the floor surfaces, which had to be followed up at the end of the day before the concrete had taken on the final set. The ground floor columns are 26 inches in diameter and 14 feet 4 inches high, the first floor columns are 24 inches diameter and 12 feet high, while the 2nd and 3rd floors are also 12 feet high with 20 inches diameter columns. These columns are spaced to give bays 18 feet by 18 feet 10 inches, and there are 224 interior columns on each floor, while the floor construction is of the standard two-way flat slab system.

The methods employed in the concreting operations were similar to those given in the previous notes on concreting as necessary to produce economical and quick work, and two plants were used each of which consisted of a 1 cubic yard mixer, storage bin, tower and chuting apparatus complete, while buggies were employed from the receiving hoppers to the place of deposit.

The following table shows the dates of the different stages in the work :—

| Item. | Concrete yds. cube. | Commenced pouring. | Completed pouring. | Remarks. |
|-------------------------------------|---------------------|--------------------|--------------------|---|
| Foundations .. | 2,947 | June 5th | June 21st | Excavation commenced June 3rd |
| Ground floor cols. and 1st floor | 2,977 | June 28th | July 10th | Floor slabs poured with cols. below |
| 1st floor cols. and 2nd floor slab | 2,850 | July 9th | July 17th | |
| 2nd floor cols. and 3rd floor slab | 2,759 | July 16th | July 24th | 432 yds. cube from 1 mixer on July 22nd |
| 3rd floor cols. and roof slab | 2,778 | July 23rd | July 30th | |
| Parapets and bulkheads | 275 | July 21st | Aug. 4th | |
| Ground floor concrete and staircase | 1,730 | July 1st | July 30th | Floor reinforced with mesh |

The output from the two mixing plants on some days exceeded 800 yards cube. It is interesting to note that the floors were finished as regards surface on these dates, and the whole of the conduit for electric lighting and the inserts for pipe attachments, which numbered approximately 10,000, were installed in the correct positions during the construction of the building. The figures in the above table for the columns and slabs include the concrete in the exterior walls as the panels between the exterior piers above and below the windows were constructed of reinforced concrete. This achievement must be considered a good example of the speed that can be attained with reinforced concrete construction, and the author has not met with a case where a building of this size has been erected in the short time of 55 working days even when the work has been expedited to give a rapid scheme. As a comparison which is of some value there were several buildings in the contract, and the largest where a steel frame was adopted has a floor area of approximately 240,000 square feet, which is about one-third less than that of the reinforced concrete structure. At the date when the concrete structure was commenced the whole of the foundations for the steel-framed building had been finished and the erection of the steelwork commenced. In spite of this fact the reinforced concrete building was completed before the steel-framed one was finished, and in fact it took some weeks longer before the latter was enclosed by walls and roof and the floors laid. The same organisation was responsible for the two buildings and the same sectional foreman actually controlled the labour, while more expediting was carried on in connection with the steel-framed structure as this building was required first to allow some machinery to be installed, whereas the warehouse was not necessary in the preliminary

operations. Various other examples of speedy work could be put forward, but many of these may not be fairly comparable and it is doubtful if the steelwork advocate can produce evidence of a multi-storey building having a floor area of over eight acres which has been erected complete in 55 working days.

With regard to speed, therefore, if the time is reckoned from the date when the contract is commenced and orders can be placed for material, the advantage generally will be with reinforced concrete as the material for the superstructure.

The second comparative item given was that of cost, and here again some difficulty arises in making a fair comparison. Generally speaking, the evidence available will show that the concrete structure is the cheaper of the two, because where competitive schemes and tenders for the two materials have been obtained the contract has invariably gone to the reinforced concrete contractor. It will also be a fairly safe assumption to make that as steel-framed construction was at one time in general use it would not have been displaced by another method unless some saving in cost could be shown by the use of the alternative material.

Steel is a comparatively expensive material, and in a steel-framed structure a large percentage of the material is not theoretically necessary, but it has to be applied for practical purposes. In reinforced concrete work this expensive material is reduced to a minimum by using it scientifically in accordance with the theoretical requirements, and the mass and solidity necessary for practical purposes are supplied by a much cheaper material—viz. concrete. It is not implied that concrete is not also required theoretically, but the margin of cost between the theoretical and practical requirements is much less when concrete is used to replace steel. Again, with steel construction skilled labour must be employed, both in the preparation and the erection, whereas with concrete work a large amount of the work can be executed with unskilled workmen at a correspondingly lower rate of pay.

The amount of saving in cost that can be effected will, of course, vary considerably according to the circumstances of the case, but it will seldom be less than 5 per cent. and may be as much as 15 or 20 per cent. As a general rule the author considers that reinforced concrete construction can be taken as at least 10 per cent. below the cost of steel-framed construction for the same type of building of equal strength.

When durability is considered the advantage is entirely with reinforced concrete, as this material increases in strength with age and requires no painting or maintenance costs, whether subjected to the weather or not. With steel construction the life is limited if exposed to the weather, unless the work is periodically painted, and the durability is therefore governed by the protecting coat, and is not a characteristic of the material itself. Even when used internally the metal will require periodical painting, especially if exposed to the action of steam-laden or moist atmosphere, and many acids and fumes which are quite harmless to concrete will cause serious corrosion and deterioration to steelwork. In the third item, therefore, the advantage is with the concrete construction, and in this case the comparison is a real one which is not based on assumptions or individual opinion.

The fourth item was that of adaptability, and by this is meant the facility with which the materials can be applied to difficult and unique problems which call for ingenuity in design and execution.

Steelwork is a very suitable method for almost any type of modern structure, apart from ordinary domestic work, and it can be applied without any particular difficulty. For single storey buildings of the factory type it is preferable to reinforced concrete, as the roof trusses will be lighter, and attachments for shafting, piping, and similar equipment will be a simple matter if the main tie is made up with two angles or channels arranged with a space between to allow hangers and bolts to pass through. Again, where heavy loads have to be supported over long spans and the available depth is restricted, it will be easier to adapt steelwork

than concrete to comply with the conditions, and there are other cases where the advantage will undoubtedly be with the use of steel. Where irregular shapes, levels, or similar conditions prevail, however, concrete will have a distinct advantage, as it can be moulded to almost any desired form in its final position, and it is therefore peculiarly adaptable for some classes of work. Although there has been a decided tendency to standardise building work in various sections, there has also been some extensive development in construction along the lines of erecting buildings to suit some specific purpose, and this has called for the execution of unique features to accommodate types of machines or fittings which were necessary to the efficient use of the building.

In the past it was a general practice to erect buildings on what might be termed "ordinary lines," and a certain amount of rough and ready conversion was carried out when the intended use called for some special provision in the form of structural eccentricities.

At the present time, however, the structural work must be made to conform to these special provisions in the first instance, as the buildings are usually erected for a definite use, and the convenience and efficiency of the usage as determined by the internal lay-out is the prime factor to be considered. This development has led to the adoption of reinforced concrete as the solution of many problems which could not be dealt with by the use of any material which could not be moulded to the desired form. Concrete in the plastic state can be expressed as a pliable and sympathetic material capable of being adapted to suit special requirements, whereas structural steelwork, as handled by the contractor, is never plastic, and can only be worked to special forms by considerable labour, and by the expenditure of time and money, which is usually out of proportion with the benefits conferred in ordinary structural work.

(To be continued.)

PART I.—I. Introduction, Steam shovels, Jan. 13; **II.** Steam shovels, Trench diggers, Jan. 20; **III.** Grab buckets, scrapers, Jan. 27; **IV.** Drag-line excavators, Feb. 3; **V.** Derricks and cranes, radial loader, paving-breakers, Feb. 17; **VI.** Surplus Soil Transport (Hand Labour), Feb. 24; **VII.** Surplus Soil Transport (Horse-drawn wagons, Steam-driven wagons), Mar. 3; **VIII.** Surplus Soil Transport (Steam-driven wagons), Mar. 10; **IX.** Surplus Soil Transport (Steam-driven wagons, Petrol wagons, Narrow-gauge track with wagons), Mar. 17; **X.** Surplus Soil Transport (Narrow-gauge track with wagons, Trucks on Standard-gauge track, Electrically-driven trucks and vehicles), Mar. 24.

PART II.—XI. Foundation Work (Ordinary soils, Soft soils), April 7; **XII.** Foundation Work (Soft soils), April 17; **XIII.** Foundation Work (Soft soils), April 21; **XIV.** Foundation Work (Soft soils), April 28; **XV.** Foundation Work (Soft soils), sheet piling, May 5; **XVI.** Foundation Work (Soft soils), steel-sheet piling, May 12; **XVII.** Foundation Work (soft soils), steel-sheet piling, pumping, May 19; **XVIII.** Foundation Work (Soft soils), pumping, May 26; **XIX.** Foundation Work (soft soils), foundation piles, June 2; **XX.** Foundation Work (soft soils), foundation piles (cont.), June 9; **XXI.** Foundation Work (soft soils), foundation piles (cont.), June 16; **XXII.** Foundation Work (soft soils), Waterproofing, June 23; **XXIII.** Foundation Work (soft soils), Waterproofing (cont.), June 30; **XXIV.** Waterproofing (cont.), July 7; **XXV.** Water Supply, July 14; **XXVI.** Concreting, July 28; **XXVII.** Concreting (cont.), August 4; **XXVIII.** Concreting (cont.), August 11; **XXIX.** Concreting (cont.), Aug. 18; **XXX.** Concreting (cont.), Aug. 25; **XXXI.** Form Work, Sept. 1; **XXXII.** Form Work (cont.) Sept. 8; **XXXIII.** Brickwork, Sept. 22.

Mr. Cyril Cliff Check, A.R.I.B.A., of St. Leonards-on-Sea, died on the 19th inst., aged 32.

St. David's Hotel, Harlech, which was destroyed by fire last May, is to be rebuilt immediately at a cost of £30,000. The contract was let on the 7th inst. to Messrs. Trollope and Colls, of London and Liverpool. The new hotel has been designed by Messrs. O. M. Roberts & Son, architects, Portmadoc, and is to be ready by next July.

During the whole of the month of October there will be on view in the foyer of The Birmingham Repertory Theatre an exhibition of etchings and drawings by Mr. E. Hesketh Hubbard, R.O.I., A.R.W.A. Mr. Hubbard is the founder of The Print Society, an international society of etchers and print collectors, and the editor of an authoritative work on etching. We understand he is at present engaged on another work on etchings and is making a series of drawings of "Building Modern London."

Competition News.

A competition open to architects practising and who have practised in the City of Edinburgh for the past two years has been arranged by the Corporation for the planning of a block or blocks of tenement dwellings, situate upon the old Jeffrey's Brewery site, Grassmarket, belonging to the Corporation. Premiums of £50, £30, and £20 will be awarded for the three best designs in order of merit. Copies of the plans may be obtained at the Burgh Engineer's Office, 1 Parliament Square. Architects desirous of competing should make application now in writing to Mr. Andrew Grierson, S.S.C., Town Clerk, City Chambers, Edinburgh.

The Secretary of the Royal Institute of British Architects has received the following cable from the promoters of the Auckland War Memorial Competition:—"Auckland Competition. All prizewinners resident New Zealand. Jury's report and photos winning designs being forwarded early date. President Institute Architects congratulates Architectural Association. Three prizewinners its students.—Gunson."

To obtain for the small community in America a hospital building efficient in arrangement and creditable in architecture, "The Modern Hospital" of Chicago has recently issued the formal programme of a competition, open to all architects. Prizes of 500 dollars, 300 dollars, and 200 dollars are to be given. The aim is to bring out new thought in hospital construction. The Illinois Chapter of the American Institute of Architects has approved the general programme as to form and method of procedure. Mr. Richard E. Schmidt, of the firm of Richard E. Schmidt, Garden and Martin, of Chicago, is the architectural adviser. The jury is to be composed of two architects, two hospital superintendents, and a graduate nurse who has had experience as superintendent of a small general hospital. The prizewinning drawings become the property of the publishing company, but the author is not prohibited from making any individual use of his designs. The competition calls for a set of plans of a general hospital of from 30 to 40 beds. Registration for the contest must take place on or before November 15, 1922, and the final date for submitting designs is January 15, 1923. The general programme may be had from "The Modern Hospital," 22-24 East Ontario Street, Chicago.

Competition for Monument at Port Said

Designs for a monument to be erected at Port Said, Egypt, to the memory of soldiers of the Australian and New Zealand Forces who fell in Egypt, Palestine and Syria during the years 1916, 1917 and 1918, are invited by the Australian Department of Defence, acting for the Commonwealth Government and the representatives of the forces named.

Designs must be the work of sculptors and architects of British nationality permanently resident in Australia or New Zealand, and Australian and New Zealand sculptors and architects residing in other countries.

A statue, or group of statuary in marble or bronze, with granite for the pedestal, or an approved hardstone, will form the main feature of the monument. The design must embrace in its composition sculpture typifying both Australian and New Zealand horsemen. Its character otherwise will be left to the designer.

Each design or model must be accompanied by a sealed, opaque envelope containing the name and address of the author, together with a declaration that the design or model is the personal work of the competitor, or joint competitors, and that the drawings or models have been prepared under his or their own supervision.

The cost of the monument is to be limited to £11,000, of which £7,500 is to be allocated to sculpture, and £3,500 is to be allocated to the pedestal, base and steps.

Designs must be delivered, free of all charges, to the Secretary, Department of Defence, Melbourne, Victoria, on or before 12 noon on March 31, 1923.

Premiums of 250 guineas, 100 guineas and 50 guineas respectively will be paid for the designs placed first, second and third in order of merit by the assessors appointed by the Department of Defence: Major-General Sir J. Talbot Hobbs (architect); G. V. F. Mann, Esq., Director of the National Art Gallery Sydney; and G. Sydney Jones, Esq., A.R.I.B.A. (architect).

The award of the assessors will be binding on all concerned. The design placed first will become the property of the Commonwealth Government.

Further particulars, including the condition of the competition in full, a plan and photographs of the site of the proposed monument, and a sketch of its surroundings, may be had on application at the office of the High Commissioner for Australia, Australia House, Strand, W.C.

A Selection of Classic Buildings of the 18th and 19th Centuries.

By Gordon Hemm.

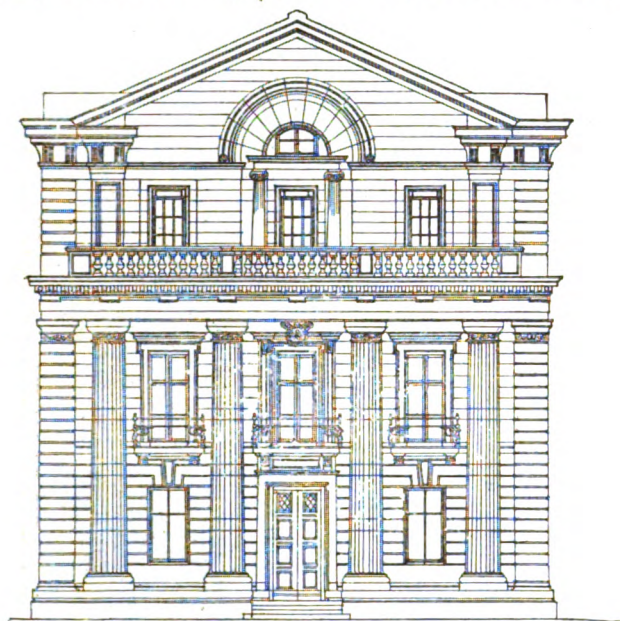
The constant progressiveness of architecture in this country stimulated the development of the neo-Classic style, which found expression during the middle of the nineteenth century. The culmination of the new phase produced brilliant results, and emanated forth triumphs in modern design. At this period an inclination towards a Gothic revival appeared, but this revival only held a momentary sway, and was not of vital consequence to influence in any way the deeply-rooted classic tradition.

Professor C. R. Cockerell, Sir Robert Smirke, Lonsdale Elmes and John Papworth were a few of the leading men in this changing phase.

The Bank of England branches were designed by Professor Cockerell. In 1832 he was fortunate to be appointed architect to this Bank, and in this capacity he produced many meritorious designs in different parts of the country.

The branch Bank at Bristol is not quite so pleasing. In the main façade the projecting buttresses at each end of the front are inarticulate and constructionally incorrect, which in effect weakens the solidity of the front. The entrances are worked into each buttress, one leading to the Banking Hall, the other to the Manager's apartments. Criticism might be raised as to the similarity of these entrances, surely in the former an endeavour might have been made to obtain an effect of importance which could only be accomplished by keeping the manager's entrance subservient. This would mean a rearrangement of the architectural units. It is a fundamental of any bank design to give great prominence to its main entrance above all other means of access. The three bays formed by the Doric columns are unmistakably the work of Cockerell, also the semi-round windows and elegant balcony rail indicating the second floor. The pediment above happily combines with the general mass and forms a fitting culmination to the façade.

Cockerell's superlative work was the Taylor and Randolph building at Oxford, erected 1840-45. The scheme is notable for its harmonious grouping. The main portico, comprising four Ionic columns, and long wall divided by surface pilasters compose the central block. At each end, in juxtaposition, a massive wing is disposed parallel to the major axis of the portico and connected to this block. These two wings emphasise the composition, the portico façade becoming subservient, and the contrast gives great scale to the connecting wings. The arrangement is admirable, also the general balance and distinct feeling for colour, qualities which indicate the hand of a master. The detail is



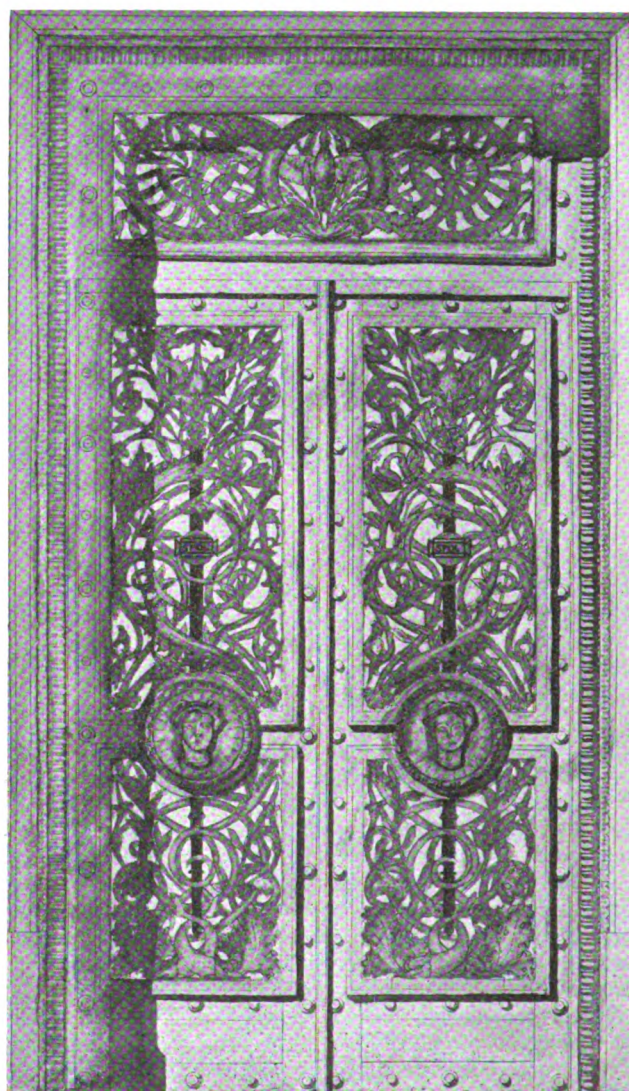
MAIN ELEVATION

BANK OF ENGLAND, LIVERPOOL.

The branch at Liverpool ranks as one of his finest achievements in this type of building. The façade in Castle Street is full of academic accomplishment. A certain severity is dominant which characterises the work, but at the same time the conception includes many delicate moulds and enrichments. Four Doric columns in ante, surmounted by an entablature and balcony of strong lines, form the ground and first floor motif. The wall surfaces between the columns contain windows, with a central doorway to the ground floor. Importance is displayed in the first-floor windows by their size and ornamental wrought iron balconies, indicating that the room behind is used by the high officials of the Bank on special occasions. The capitals to the columns are original in design peculiar to the manner of Cockerell.

The two floors comprising the Doric order are superimposed by an attic storey, including another floor, crowned with a projecting pediment supported by coupled brackets, a motif which Cockerell frequently applied to his Bank façades.

Architecturally the interior is characteristic of the architect's internal arrangement, which follows the style of the exterior. The Banking Hall is very impressive, and conveys to one the idea of great strength, an element that is essential in all works of this type. It is unfortunate that the Bank authorities do not allow measured drawings or sketches to be made of the interior of their buildings, as a true conception of their merits can only be gained by a detailed representation in this form.



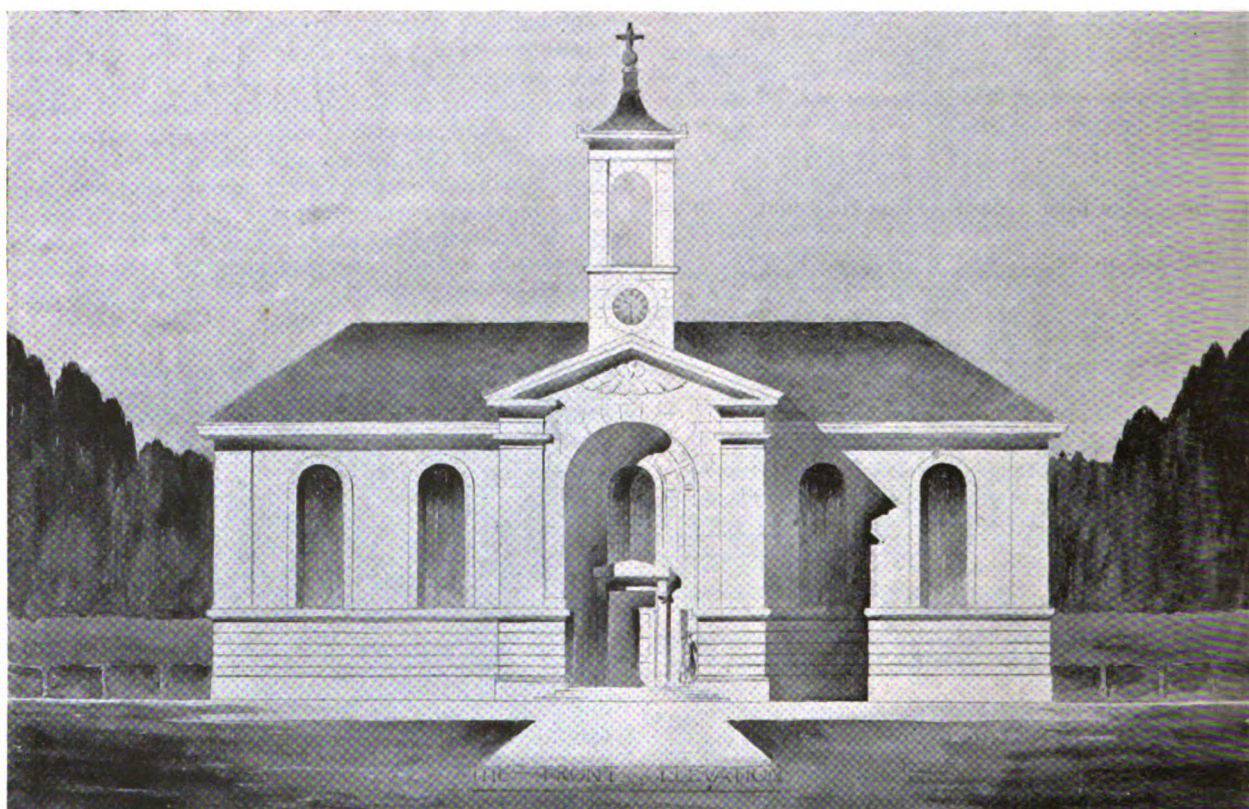
INTERNAL DOORS, ST. GEORGE'S HALL, LIVERPOOL.

rich in ornamentation, yet applied with care and judgment. Cockerell was appointed in 1851, on the premature death of Elmes, architect to St. George's Hall, carrying out Elmes' original idea.

St. George's Hall is a building that is veritably inspired. From whatever view the exterior is seen it always composes itself perfectly, which proves that the architect must have studied the grouping from every perspective point. It is academic in principle and abounds with stimulating detail. A sense of immense scale characterises the Courts, Circular Concert Room and Hall. The delicacy of the southern porticoed door, and simplicity of the northern Doric entrance are the result of careful and detailed thought. The internal doorways are excellent specimens of the craftsman's art, carried out in a framing of bronze and brasswork. When it is realised that Cockerell did not commence the practice of architecture until his twenty-ninth year, he accomplished great things. The opportunity came to him for continental travel at an early age, and the reputation he gained as a scholar during the time abroad paved the way for his future success.

the south elevation, the architect relying for his effects by judicious proportioning. The principal composition that strikes the dominant note is in the application of the central feature. An unusual fusion of door and window arrangement denotes this approach, the two elements are framed in by a concave panelled treatment, culminating in a semi-arch, the panels continuing round in radiation form. Two wide pilasters strengthen the angles over which an entablature returned on itself is schemed, terminated with a pediment. The sun-burst decoration relieves the plainness, and appropriately fills up the space formed by the pediment apex. The elongated tower crowning this motif contrasts with the horizontal lines of cornice, plinth and base in a pleasing manner; in the same way do the long windows containing semi-circular heads.

The west elevation is similar in character to the south, minus the porch. Three windows are grouped together, and below, the main entrance doors centralise this façade, and project some 6 in. beyond the main wall line. On the whole, this conception is one of Cockerell's minor accomplishments and worthy of the name it bears.



HOLY TRINITY CHURCH, HOTWELLS.

Cockerell drew his inspiration from the works of the highest order, which he admired with reverent affection. Direct influence can be traced in the Scottish Monument at Edinburgh from the Athenian Parthenon. It was his intention to erect a structure resembling the masterpiece of Ictinus and Callicrates, but a lack of funds prevented this noble idea taking practical form.

Although Cockerell's buildings are originally conceived there are underlying influences discernible that clearly indicate the study of the great classic masters of the past.

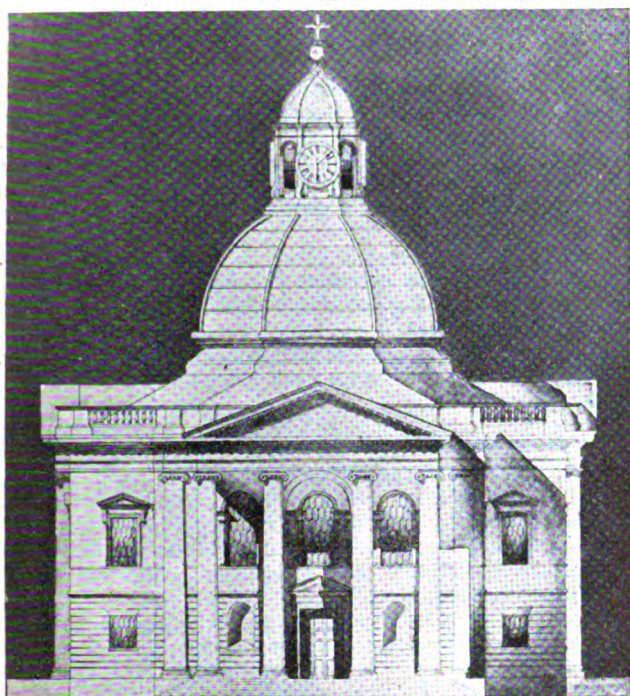
Holy Trinity Church, Hotwells, is a building full of individuality and restraint. Cockerell's ability is here exhibited in a new sphere, the designing of a suburban church. The plan is simplicity in itself, being oblong in shape, with a projecting pedimental porch on the south side acting as one entrance to the ground floor and gallery. Another entrance is placed at the west end, on an axial line with the main aisle. The gallery is supported by four circular columns on each side of the nave, these columns continuing the full height of the interior. The cornice above performs a constructive and an æsthetic function, taking the thrust of the low barrel vaults and also the cross beams.

Freshness of idea pervades the exterior, especially in

The Council House, Bristol, located on a corner site, is considered Sir Robert Smirke's most ornate design. This architect imparted into his work a monumental dignity, an element which is lacking in some of his buildings. He was responsible for numerous public works, but none possessed the architectural qualities of the exterior of the Council House.

Smirke frequently applied the Greek Ionic order, this being his favourite. The building reveals it in the single form of two three-quarter columns in ante, with a repetition of the same motif on each side, substituting the columns for pilasters, and this treatment with the addition of the slightly recessed wings at each end compose the main façade. A classic doorway placed between the three-quarter columns centralises the front, and above runs an enriched frieze denoting the first floor level. The windows are well shaped and assist in the general effect, while the simple proportioned entablature, and crowning parapet over, arranged to form an architectural feature (containing a sculptured figure), emphasises the centrality of the façade. Coats of arms worked on each side in panels tend to lead the eye towards the figured pedestal.

The Grecian element is strongly in evidence, being a

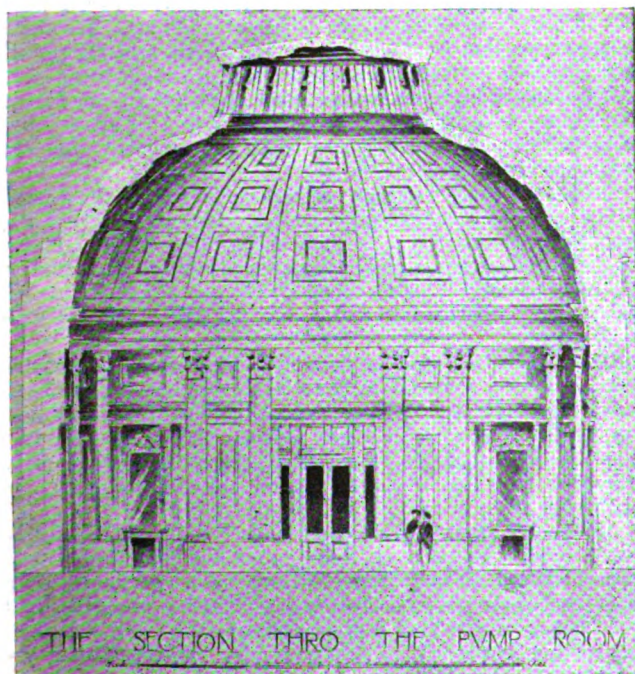


ST. PAUL'S CHURCH, LIVERPOOL.
DETAIL OF MAIN FACADE.

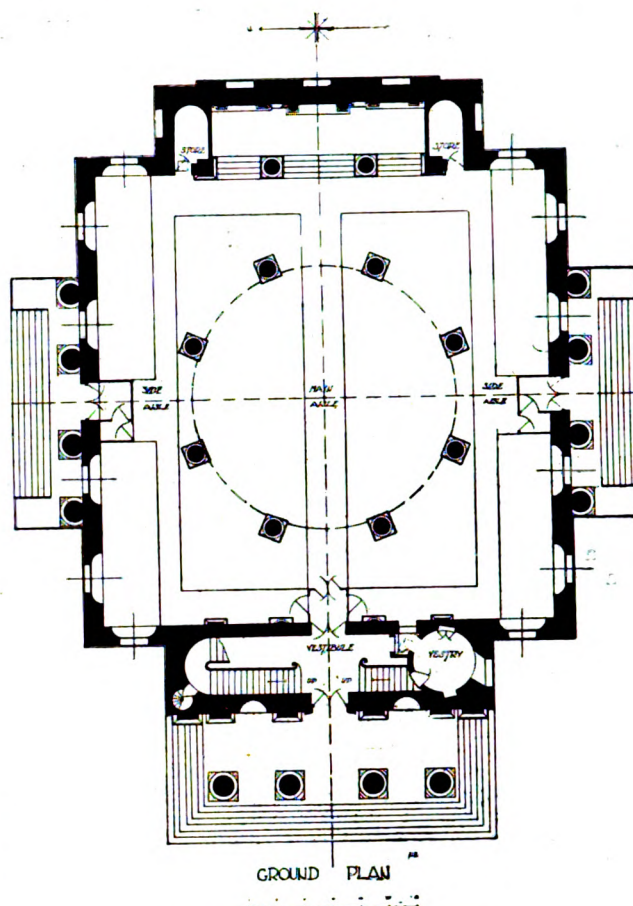
transcript of the Ionic order suited to the requirements of a modern building. In the plans practical necessities overruled the opportunity for well-ordered shapes and interesting planning. The sections are somewhat unhappy, which is no doubt due to this reason.

There is quite a feeling of familiarity between this work and the recently demolished Manchester Old Town Hall, characterised by the application of the Greek Ionic order to both buildings, and the fact that the two architects favoured this order in preference to any other.

One of the best classical churches of the eighteenth century in Liverpool is St. Paul's Church. Although one of the smallest edifices it forms a valuable contribution to the provincial architecture of this period. Composed in the true classical manner, the plan forms itself into a simple rectangular shape, with minor projections at the east and west ends, the former embodying the space for the altar and the latter the vestibule and vestry. The body of the nave contains a circle of eight columns which carry an octagonal dome.



THE ROTUNDA, CHELTENHAM.



ST. PAUL'S CHURCH, LIVERPOOL.

The portico, with its four Ionic columns, features the external elevation to the west, and behind these columns a series of pilasters attached to the main wall act as responds. The two side elevations contain four three-quarter attached columns projecting from the wall face, which are surmounted by an entablature and pediment. The great octagonal cupola with its lantern termination is finely conceived, and although somewhat out of scale with the lower portion of the building, its well-designed outline expresses a natural linking up with the rectangular mass below.

The interior of the building was originally lit by an inner dome containing eight circular windows in the vault. This arrangement rendered acoustic properties ineffective, and numerous attempts were made to remedy this defect, with the final result that a slightly curved ceiling was thrown across, with plastered-in panels. This undertaking, though successful acoustically, completely marred the architectural dignity of the interior, with the additional loss of good lighting.

The architect of the church, Thomas Lightoller, was little known in Liverpool, and the record of other work attributed to him seems to have been designed in a debased Gothic style.

This scholarly building will in all probability be demolished shortly. It has for a long time been condemned as unsafe, and in its present state (were the opportunity ripe) it would require a large sum of money to renovate it for the church services once again. The property belongs to the Lancashire and Yorkshire Railway Company, and it is their intention to demolish the building for the purposes of extending their railway workings.

The London District Council of the National Federation of Building Trade Operatives have passed a resolution requesting the Government "to take immediate steps to secure a substantial reduction in workmen's and ordinary train fares, in view of the big reductions that have taken place in the wages of the building trade operatives, and also in view of the fact that this section of the community is specially affected by reason of the large amount of travelling necessitated, and the continual changing from job to job."

Institute of Architectural Modellers.

(Communicated.)

OBJECTS.

- (I) To encourage and uplift the art of modellers and designers and to maintain the dignity of the art in all its branches.

In approaching any effort to reach this desired condition it is necessary to determine from what point the stimulus is needed. At present the modeller's status is *nil*—he has no standing whatever except his own personal skill.

The responsibility which he has when entrusted with modelling places him above the level of an ordinary mechanic, and he should be looked upon, not as a mere tool in the hands of others, but as an artist, worthy to produce responsible work, which is so open to the criticism of those who design great buildings. To quote from a letter of a famous architect:—

"If we look around at our architecture, are we not sadly cognisant of a disheartening dead level? Are we not perpetuating a mere standard of mediocrity that is never humanised by personality nor glorified by any brilliancy?"

This sums up the art of building as we find it more or less in this and in every other country. Recognising the dead level in architecture, it must necessarily follow that the same applies to modelling and designing, because history of art teaches us how inseparable the two are. We find architecture and sculpture blended together, and in many cases a brilliancy of richness results, but in other cases a building quite lifeless is produced by some present-day architects.

Let us define exactly what we mean by art, and follow it closely in all its aspects:—

Art is the study of natural shapes and colours in all their beautiful manifestations, their traditions in immortalised expression, through the special emotional and temperamental sensitiveness of the artist, stirred by various influences, social environment, religion, climate, philosophy, science, etc., as many factors which give artists reason to exercise and express their creative mind.

It is remarked that the best artistic productions are born through the perfect understanding by artists of the spirit of their time. Egyptian, Greek and Gothic arts are typical and great examples. It pleased the artists of these periods to give to the world splendid specimens of their work—masterpieces in which we admire the quality, brilliancy and personality. Let us examine these art periods of the past and attempt to find out the answer to this important question: "Why did art attain to such greatness, dignity and success in these ancient periods?" Take the Grecian art, which surpasses all others, and to which we so often turn to express beauty, ideals and symbols.

We know that it must have been a religion with them, for we find in every branch of their art, architecture, sculpture, decoration and design, social life, philosophy, literature, poetry, history and sciences represented in such a manner that so small a spot on our globe has since the earliest time been, and yet is, one of our best guides.

We think Hellenism the ideal of perfection in both art and thought—so much so that we still delight to copy it.

Roman art tells the story of conquerors of the world. Dark ages recall to memory centuries of barbarism, stamping out all vestiges of civilisation and art, a period of ignorance and brutal force, slavery and terror, tempered and lighted in the end by hope in Christian faith.

We have Gothic art speaking a world of ideas in new artistic expression, and out of all Greek influence. Later on, travels and discoveries give Renaissance, etc., and reveal that art is not simply an expression of beauty, but history of mankind written in works which give us clear understanding of their life and ideals as deeply and truly as the best historic documents. So much so, that every country at some period puts on its works its own stamp of originality in harmony with its own character.

What is true of the past is true of us: our present art is telling its own story, which is not one of great masterpieces. We find that it is necessary to encourage and uplift our art and maintain its dignity (which is the object of our Constitution), and we desire to know "what discourages and keeps down the art of the modeller and designer, and which is the way to stop the decadence of the art in all its branches?"

It seems difficult to realise that, in such a century as this, our art does not reflect the wonderful achievements, scientific discoveries, and unimaginable exploits which are so numerous now that there is hardly time for enthusiasm over anything. We are so practical that we have no time to admire individually, but think only of reproduction, and of the creation of quantity, and in this feverish haste we are playing with our nerves to such an extent that they will not answer our successive emotions;

the imaginative self of the artist is submerged by the practical element of the craft, and it is thus that artists are asked to race with their time.

Does this mean that we are all inferior to the old masters? We say, emphatically, no! Very many of us have or could get enough knowledge to enable us to express anything desired. We have clever men enough, but while their quickness satisfies the commercial men, the lack of feeling in the production, caused by the environment of rush and commercialism, results in many architectural failures.

Our century, wonderful as it is, gives nevertheless the impression that it is incomplete—the practical side thrives at the expense of the idealistic, and artistic productions become almost impossible. For the tools to express poetry of the soul, the mind must be quiet, and not bound by so many restrictions. Initiative can never be shown while commercial and industrial questions predominate.

Architecture and sculpture, as we know, being bound together, this "working in the dark" contributes to the perpetuating of the standard of mediocrity that we deplore to see around us, despite the science of our time with its wonderful advantages, the knowledge of the architectural masterpieces of the past, experience, wealth, and the world's materials at our disposal—all of which should assist us to produce as great achievements as those of the olden days.

We now come to the point where—knowing on one hand what past ages were and the reasons, and on the other hand what modern art really is and why—we arrive at the conclusion that we are hampered by multiple causes which produce an atmosphere absolutely unhealthy to art. Is it to say that the removal of these bad conditions could uplift and maintain the dignity of the art?

Commercialism and industrialism, so far away from art as they appear, are, if we consider the achievements in their possibilities, beauty too; but I should say beauty without grace or poetry; perhaps disdainful of both or too apt in their strength to look on it as a secondary or useless attainment. It is to be recognised that art must beautify every contemporaneous expression—art must idealise progress. Our era, to be complete, must see collaboration of science and art, and show together, giving each one its value, achievement of all aptitudes of mankind.

Beauty must become the enveloping of modern life, and to attain this object the first and most fitting place to require our attention is the work of building, for is not building the scenery of life? the public's property by sight—a book open to all, in which we can express our best in every page (every frontage), and so provide them with the most pleasant view, for their comfort in work and enjoyment in leisure.

Very much has been said about the public's artistic ignorance, but up till now artists have done nothing worth mentioning to do propaganda for their ideal, and yet they cannot expect inartistic people to ask for what they do not know. As artistic education, appreciation and tastes are created by environment, so every artistic creation in building must help to influence public taste, and, following this consideration, artists ought to determine to put not only the best of themselves in their work, but to resist everything which deteriorates the art. We ought to remember that frontages are our showcards, creating artistic interest which can make our art understood, loved and prosperous.

We notice that in some determined spots (at Oxford Circus, for instance) certain rules are enforced in construction, on æsthetic grounds, and it would be an advancement were this rule applied on a larger scale.

Architecture and sculpture working conjointly for the decorative part of the building will assure an artistic benefit, resulting from the understanding of the mind and purposes of the architect, by the modeller, who can in his turn exercise his creative mind in his own branch. Well understood, his art gives the artistic finish—but badly handled it can mar the highest architectural conceptions.

It is possible that a kind of Committee of Artists of all branches could be set up to decide if there are any artistic objections in every new creation. We could then hope to see around us beautiful buildings, planned with consideration of the surroundings, combining effects of greatness, beautiful and inspiring ensembles, speaking of human genius and of the dignity and knowledge of an epoch.

Always anti-æsthetic, and consequently to be reformed, we may see advertisements on frontages of buildings, and decent houses which look ugly through this process. Architects' and modellers' works are spoiled every day and made unsightly, and I am not even sure that a great commercial benefit is gained. Advertising boards or signs fight each other, and the only lasting impression is the nightmare of all these letters, big and small, playing havoc in the general outlook and the peace of mind.

On the Road in Holland.—IV.

By Charles G. Harper.

The chimney-stacks in Friesland are peculiar, and nearly always of the same type. They are surmounted with a kind of muffle, partly for the purpose of preventing the heavy snow in winter from descending the chimney, and in part to make it impossible for the storks to build their huge nests of sticks in them. Not that the storks are discouraged. They are, indeed, considered lucky; and a feature in the Dutch landscape is the tall post on farm or common, especially built for the storks to nest there, on the platforms with which these posts are provided.

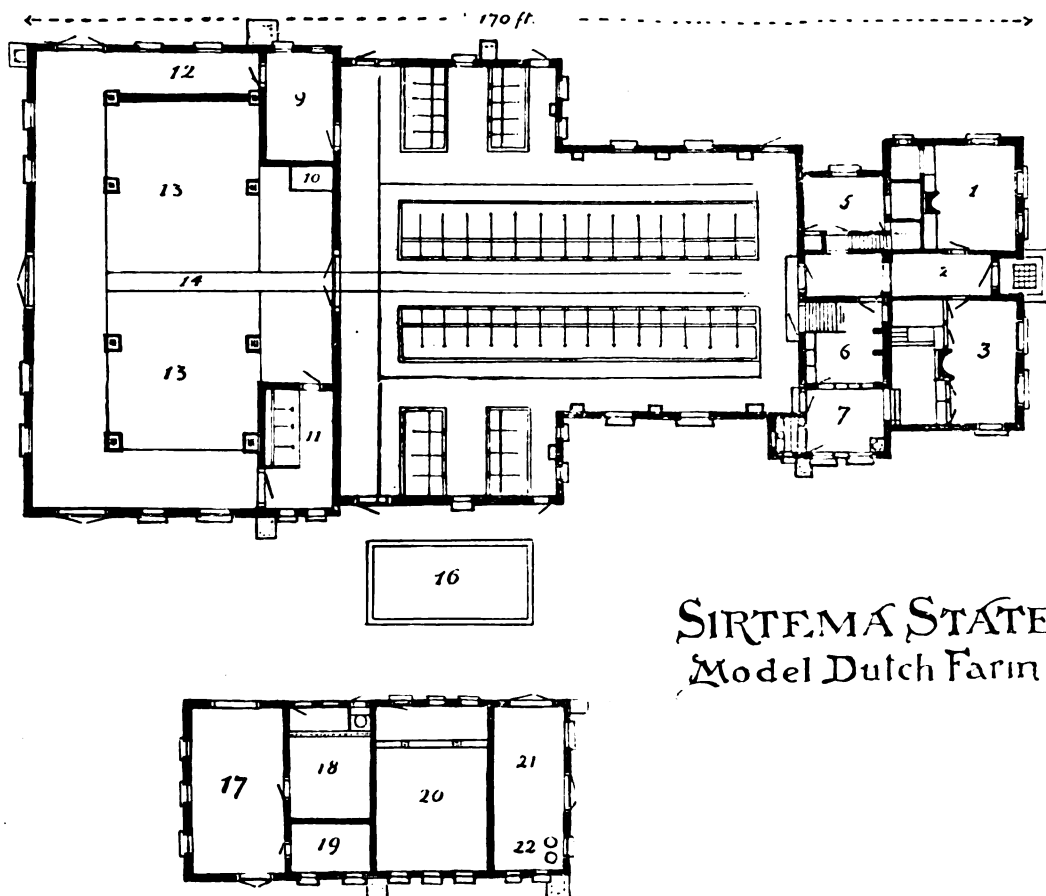
A usual farm accessory is, of course, the fowl-run. The Dutch variety of this customary feature is amusing to the stranger, but the arrangement is logical enough if the details are indeed laughable. The "hinnerin," as it is called, consists either of an external pen, or net, according to individual ideas, where the fowls are either cooped up or are permitted to wander at will. But in any case they go upstairs to roost among the timbers of the barn at night and descend in the morning. The amusing part of it is this little staircase, or inclined plane, running up into the eaves from the ground up the exterior wall. It is always daintily made, and may be enclosed within

brightly painted sides or equally gay-looking palisades. If solid sides instead of palisading the wood-work often will have little glazed windows. These windows are placed here presumably for the fowls to look from. It is the last word in delicate consideration, and compares with the courtesy which gives the cows windows furnished with lace-edged blinds.

Toujours la politesse !

Friesland farm architecture exhibits few and non-essential changes in the newly-built farmhouses. You find, it is true, that the modern farmer does not commonly live to any extent in the cow-stalls. The larger old farm-houses have still those curious bedrooms that were once an invariable feature of domestic life in every stratum of Dutch society: those bedrooms where you see no bedsteads; where the family climbed up into cupboards for the night into their box-beds, and closed the folding-doors definitely upon the outer world. In the modern farmhouse, and often in the old ones where the present generation have up-to-date ideas, the bedstead in the room itself is now seen.

The general lay-out of a new farmhouse will, however, be on those traditional lines which have been found good



SIRTEMA STATE
Model Dutch Farm

SIRTEMA ESTATE.

DWELLING-HOUSE.

1. Reception-room.
2. Passage with communication direct to cow-stalls.
3. Living-room.
4. Lobby.
5. Bedroom.
6. Kitchen.
7. Workroom.

COW-STALLS.

8. Stalls for 46 cows.

BARN.

9. Box for Calving cows.

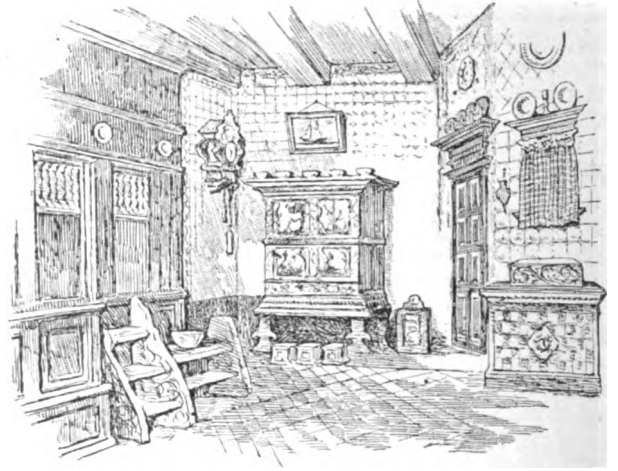
10. Water-tank.
11. Stable for 4 horses.
12. Box for calves.
13. Barn.
14. Rails through barn to cow-stalls: for transport of hay, etc.
15. Barn passage.
16. Pit for liquid manure.
17. Shed.
18. Box for bulls.
19. Box for sick animals.
20. Box for calves.
21. Shed for carts, hay and harvest machines, etc.
22. Gas-plant.

and embody the accumulated wisdom and practical experience of the country. The illustration here of "Sirtema State," at Engelum, near Marssum, shows the general appearance of the house on a large cattle-breeding farm. It was built in 1909, and is in every respect modern. Belonging as it does to the trustees of the very wealthy Popta charities, it was erected from an ample purse, and is in no way stinted. But exceptionally in this building, although its lines are the old conventional ones, the roofs are wholly tiles with pantiles, instead of being thatched. The three tall rods seen springing from the roofs are those of lightning-conductors, usually a prominent feature in these districts; just as also is the curious decoration at the gable ends, with swan-necked device ending in a finial. Here, too, at Sirtema, the cows are littered down on straw, and they face inwards.

But whatever the age or size of these farms the house exhibits always what to an Englishman is more or less a curious air of gentility. Facing its front elevation it looks not in the least like anything an Englishman would expect a farmhouse to be. It is never picturesque, rarely homely-looking, but always with a curious pretentious formality, and looking very French and decidedly of an urban rather than of a rural type. It is rather as though some typical city man had retired into the country and decided to turn farmer, building himself a house whose front elevation should be all neat brickwork with gauged joints, and polished front door and flanking windows of plate-glass. Glance through the windows of a typical wealthy Friesian farmer's house and you will see that the furnishing inevitably accords with this kind of exterior. Plush or velvet-upholstered furniture is the sum of it, together with showy mirrors. You need not be chary of glancing through those front windows. No one ever is

houses in England—that is to say, I made a list of them. You could more easily make a list of the rural houses in Holland that were not moated and write a book on those without moats as the curious exceptions.

But if, indeed, the farmhouses in Holland are not picturesque, you cannot lay that charge against other kinds of buildings. From private houses and shops, up



HINDELOOPEN ROOM IN THE FRIESCH MUSEUM, LEEUWARDEN.

to town halls and churches, they exhibit every variety of invention, from modest beauty up to flamboyant extravagance. There is a robustious invention and extravagance of outline in most Dutch architecture which in its way recalls the rollicking humours of the peasants in the pictures of Franz Hals, Van Ostade, and Teniers. The queer domestic gables, elaborately curved and convoluted, the gay colouring of the window-shutters, the bulbs and onion-like protuberances and nameless excrescences of the towers and spires of town halls and churches are all the results of that rollicking boisterous Dutch spirit which is a revolt from, and a protest against, the eternal flatness and tame nature of the country's physical geography; a kind of revulsion, in fact, from the consciousness that it is the very negation of scenery; that their land is less a part of the continent of Europe than the rinsings of it, an ages-old alluvial deposit brought down by the Rhine and other rivers. "Our country," they seem to have, more or less consciously, thought, "has no physical individuality; we will be individual with a national character, and so, indeed, shall our architecture."

While this is a general conclusion, there must yet be drawn a marked distinction between the towers of the northern and the southern parts of the country. In the north we find the church towers, as a rule, far more staid, plain, and unimaginative. They are impressive indeed by their bulk, but they have no adornments. How impressive they can be at a distance you see by the distant view of Grouw across the great Friesian mere, which brings all the fascination of water to the making of a picture. There rises the sturdy brick church tower with that saddle-back roof which is the distinctive style of this region; and down below are the clustered masts and pennons of the eel-boats, always a very decorative feature.

Contrast with that any view of Leyden, a university town which in most of its aspects is not characteristically Dutch. Indeed, the university precincts almost exactly resemble the old brick courts of the Temple, in London. But nevertheless Leyden possesses one corner that is very Dutch indeed. The water is not precisely a canal; it is the Old Rhine. Note the curious classic and restrained covered way over the bridge, and the amusingly unrestrained upper part of the Stadhuis tower. The lower stage is sober enough; but the Dutch imagination has run riot all the rest of the way up.

And in truth, although Holland is a small country, the Dutch are a great people, of well-marked individualities; and their art, whether in painting or in architecture, is an independent expression, a something which owes no allegiance to alien influences.



THE HINNERIN.

in them, unless indeed it be on Sundays. They are state-rooms, for dignity, rather than to be used.

Going southwards the Friesian type of farmhouse becomes a little modified. In the Hoorn and Enkhuizen district they are more ornate. The windows and the brass furnishings of the front door have more spit-and-polish; the gateways and palings are more ornate, and the thatch is sometimes elaborately patterned. Also the gardens within their moats are generally planted with something garish, such as scarlet geraniums, or calceolarias and lobelia. Most farmhouses, as indeed, most country houses in Holland, are moated. Once I contemplated writing and illustrating a book on moated

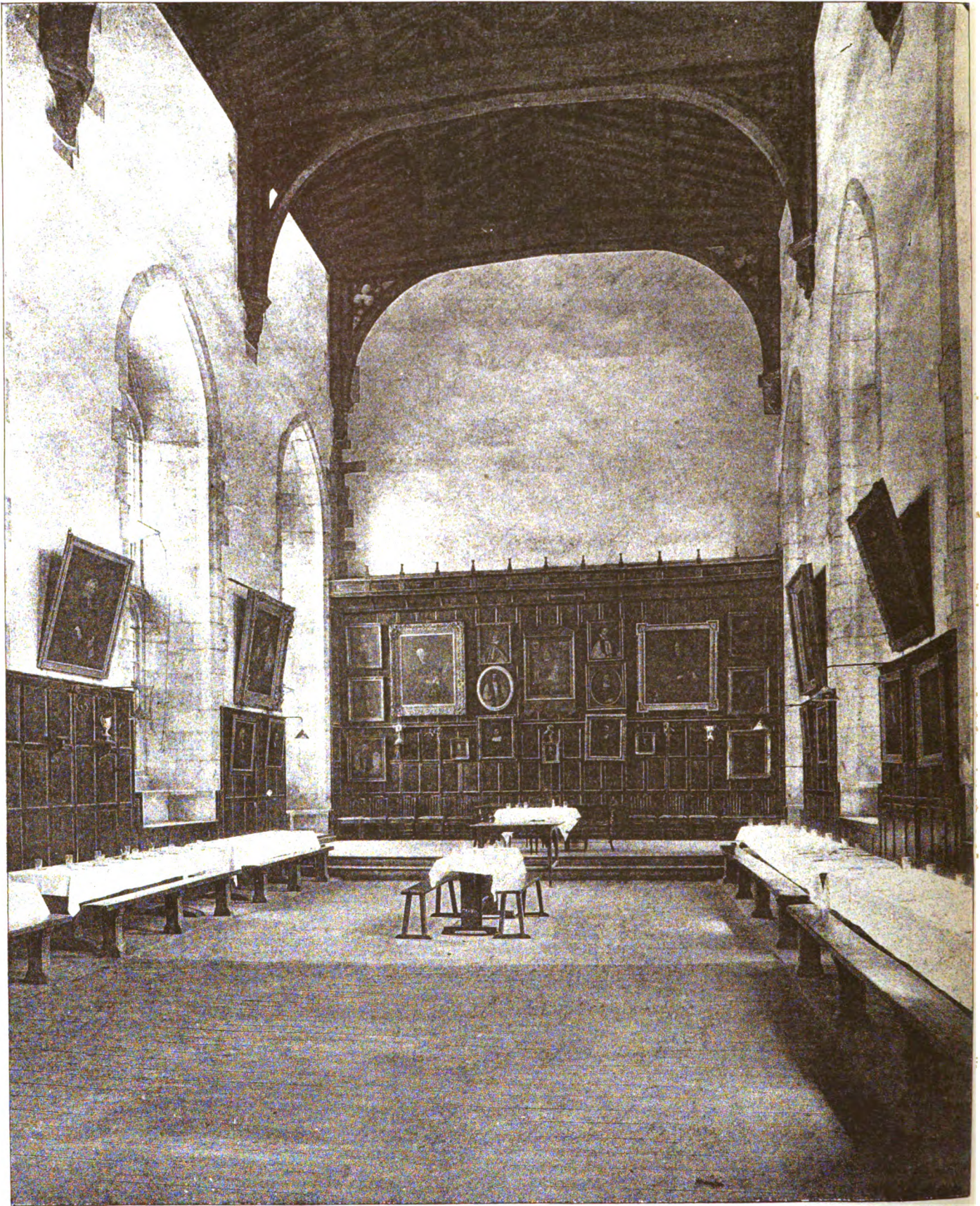


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WINCHESTER COLLEGE : THE DINING HALL.

THE ARCHITECT, SEPTEMBER 29th, 1922.

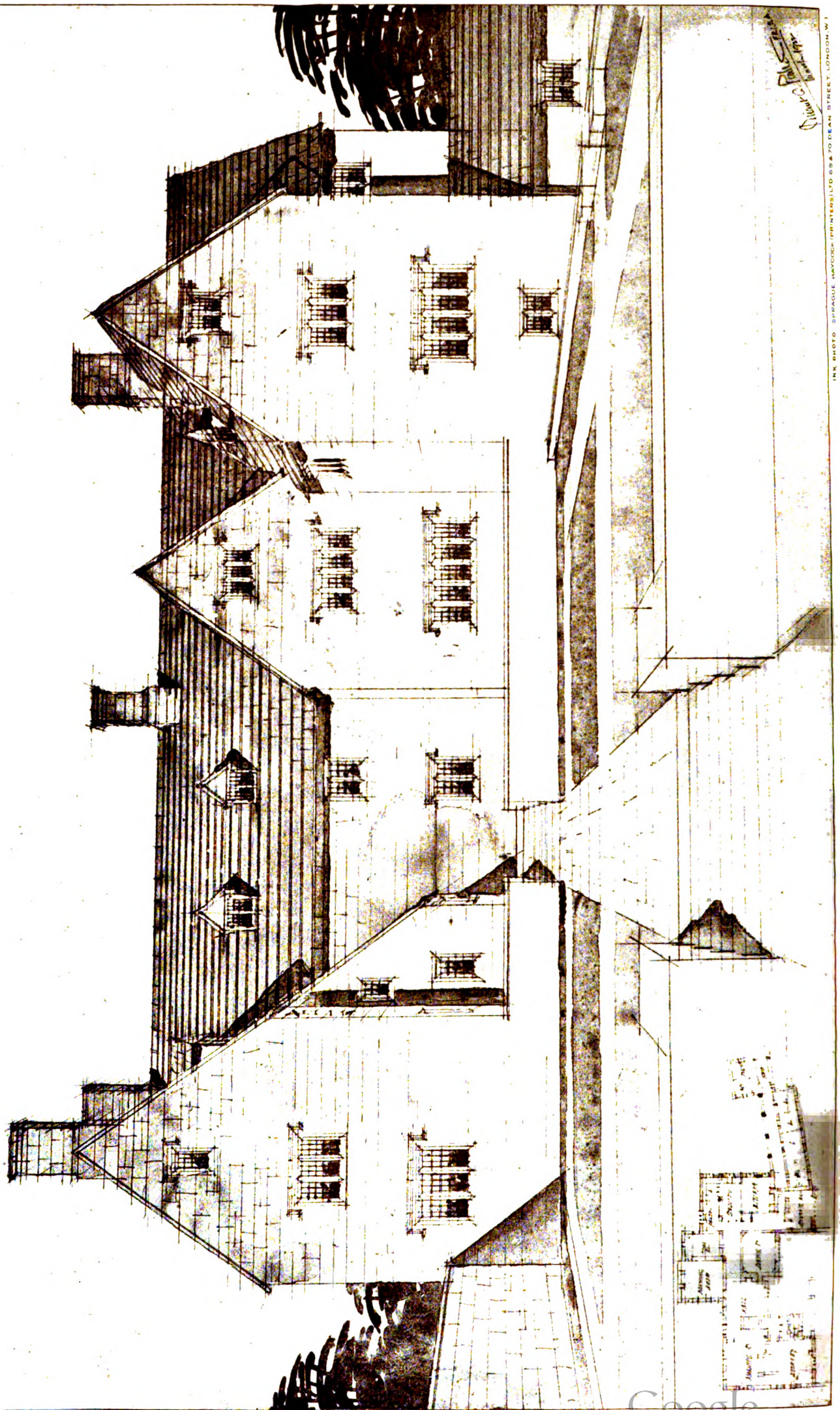


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WINCHESTER COLLEGE: THE SCHOOL CHAPEL FROM THE EAST.

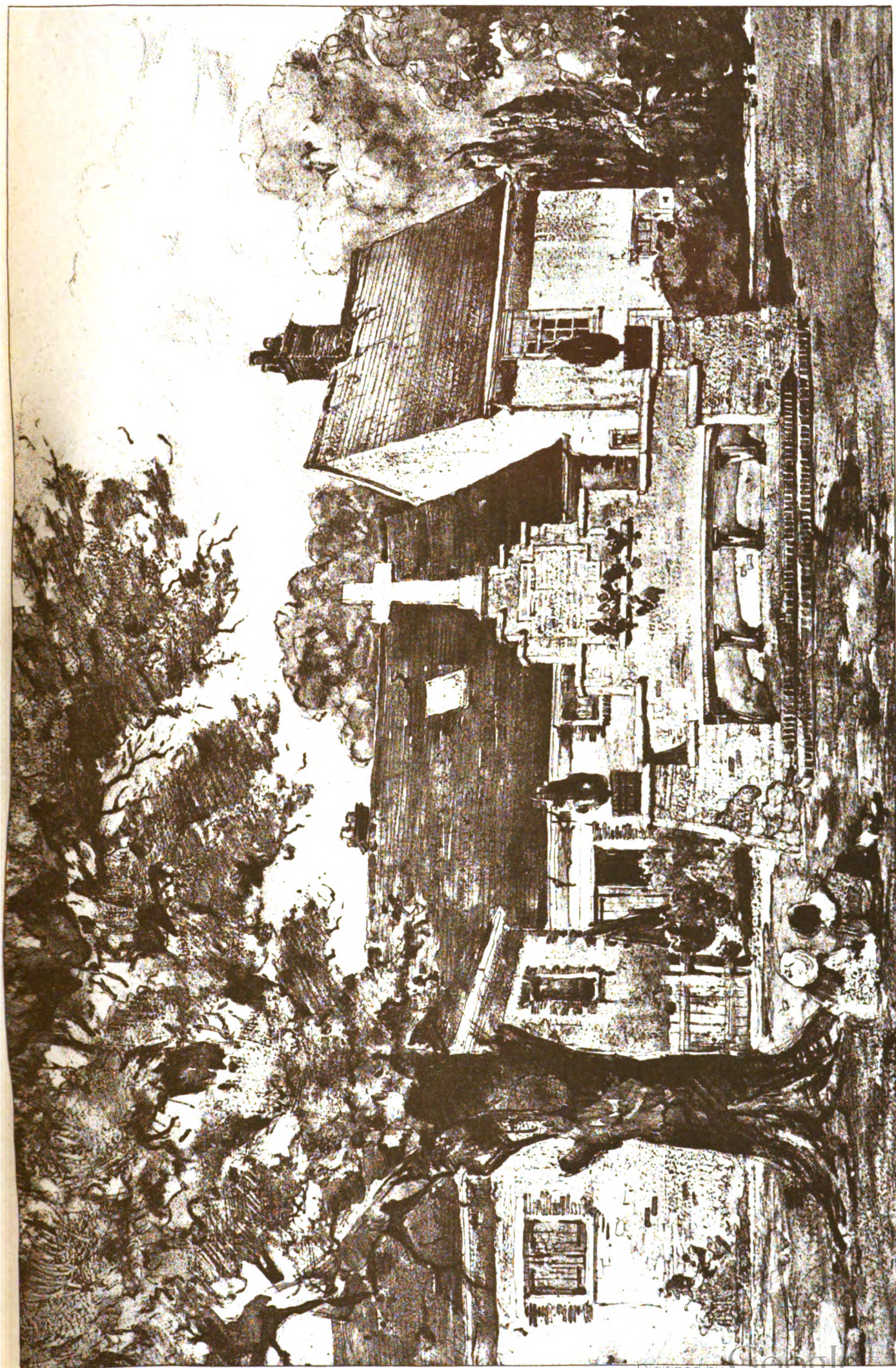
PHOTO. BEYFONG LAMBERT.

STEEPLE MANOR, DORSET.



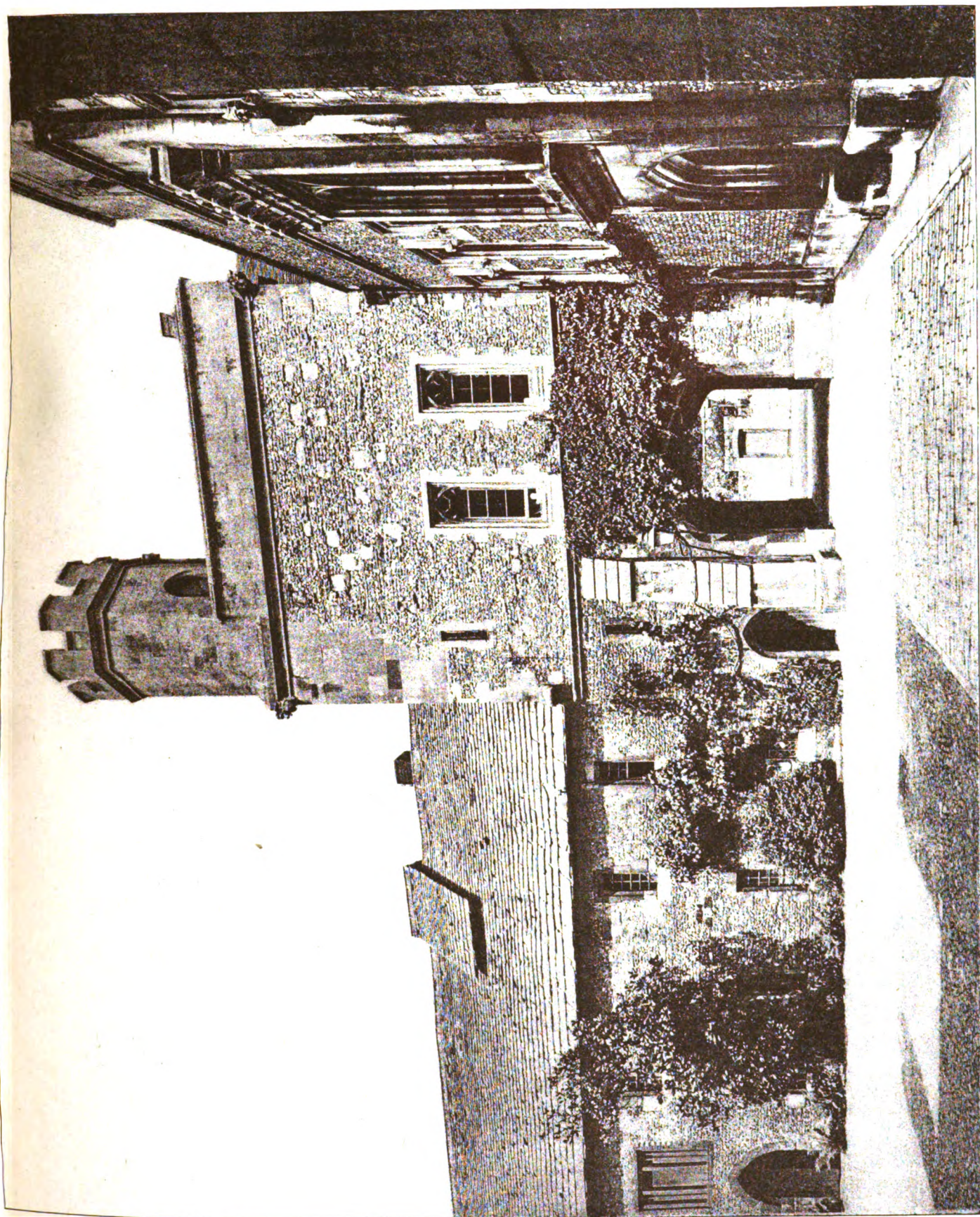
STEEPLE MANOR, DORSET.

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WAR MEMORIAL AT BOSHAM.
IMRIE & ANGEL, ARCHITECTS. DRAWN BY P. D. HEPWORTH.

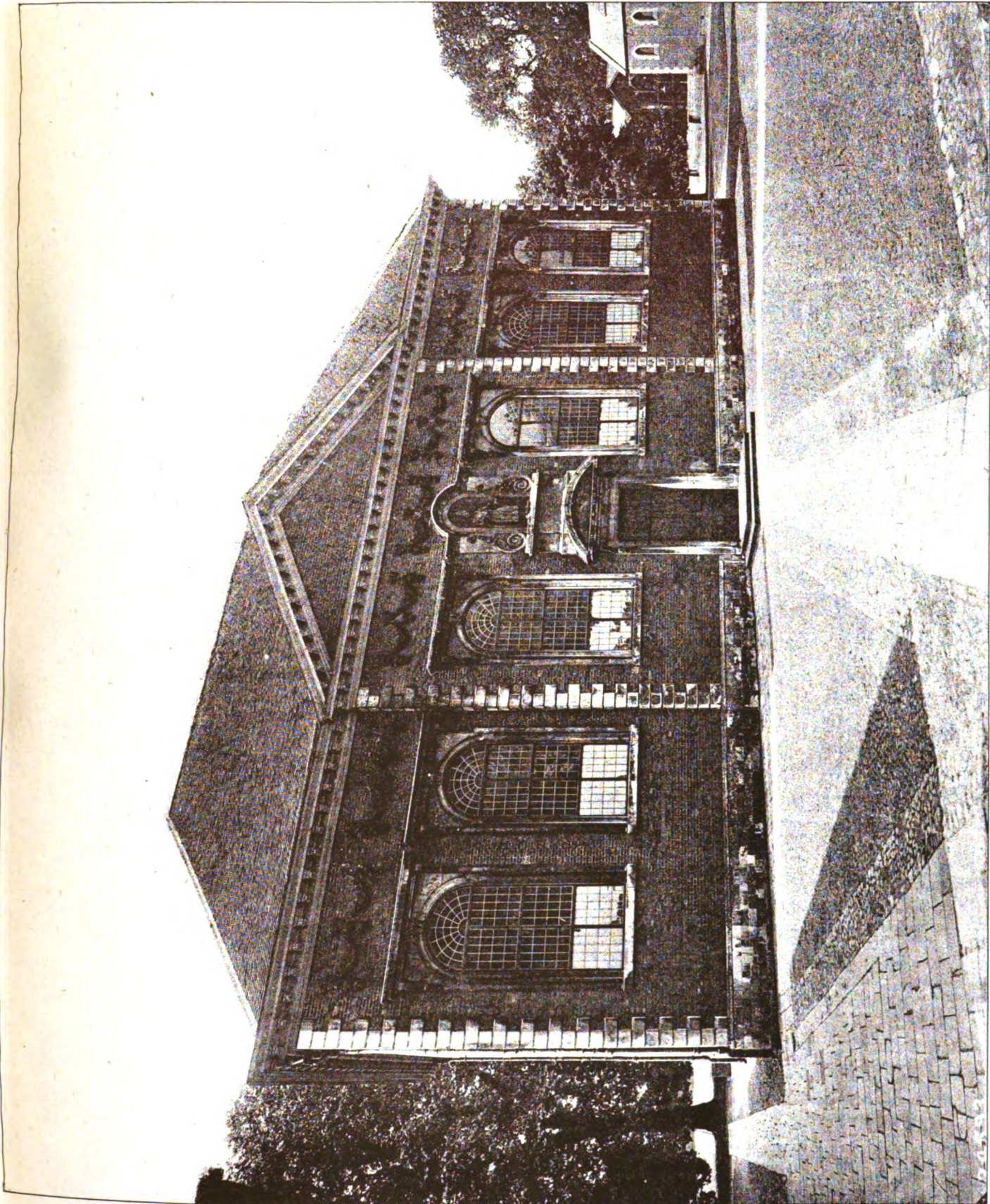
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WINCHESTER COLLEGE: THE OUTER COURT.



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WINCHESTER COLLEGE: THE OLD SCHOOL.

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The American Debt to Spanish Art.*

BY A. D. F. HAMLIN,

Professor of Architecture, Columbia University.

I must begin with a disclaimer. I have never travelled in Spain or in Spanish America; I have not even visited our own south-west or the Pacific Coast. I can only offer you the results of some study of the subject at second hand: the impressions of a student of the history of architecture and the allied arts, derived from a modest amount of reading and of study of photographs and such material as is available in the libraries. For us in the United States the subject of Pan-American art is comparatively new. It was not until within the last thirty years that we reached the initial stage of appreciation of our own art history. Even our Anglo-Colonial architecture was ignored until the last quarter of the last century; it has been chiefly since 1900 that we have made it the object of widespread interest and intensive study. We have been much slower in developing our interest in, and study of, the Colonial art of Spanish America in the United States and beyond us to the south. Our national ignorance of Hispanic-American culture, and of the Spanish art out of which its art was developed, has been disgraceful. Thanks to a small number of devoted enthusiasts and to the growing wealth and taste of our south-western and Pacific communities, we have begun to emerge from this ignorance, and to discover and appreciate the wealth of our Hispanic inheritance.

I

To start from the beginning, we must, of course, go back to Columbus. Spain and Italy must jointly share in our debt to him for making American art possible by making America known to Spain. We must then acknowledge our debt to the *conquistadores* whose subjugation of so large a part of America to Spain led to the development of the rich and fascinating art of the last four centuries in those lands, an art whose wealth and suggestiveness we are tardily learning to appreciate and to profit by. But this art is so largely an art of religion that we are constrained to acknowledge an even greater debt to the Church of Spain; to her missionaries and priests, to their zeal and energy, to the self-sacrifice and devotion with which many of them gave their lives to labours among the Indians of Mexico and our south-west, in regions where there was no precedent civilisation and art like that of the Incas, the Mayas and Aztecs. We owe a debt finally to all those Hispanic-American peoples that have in the centuries since the conquests carried on the arts taught them by the conquerors. And all these debts will increase in amount and value as we appropriate more and more of the suggestions offered us by these arts and incorporate them into the fabric of our own arts. This appropriation and incorporation has begun in Florida, in New Mexico and Arizona, and in California; and the results are so satisfactory, so admirably suited at least to their environment in those states, that we may expect to see them extended to other regions, with such adaptations and modifications as changed environments may require.

II

A history of Hispanic-American art, even in briefest outline, would take more time to recount than is allowed me to-night, and more time to prepare than I have been able to command. I can only cite a few facts as landmarks. The first Spanish city in America was Isabela in Hispaniola, founded in 1499, but early abandoned, and leaving only a few ruins to-day. When between 1521 and 1540 Pizarro in Peru and Cortez in Mexico reduced the Incas and Aztecs to slavery, Spain was building, in Toledo and Granada, Seville and Salamanca, those palaces and churches whose rich and minute Renaissance decoration has received the name of Plateresco, the silversmith's style. The priests and missionaries who followed the *conquistadores* in America began at once, with the help of the skilful native workman and the wealth derived from conquest, to erect churches and monasteries in the Spanish fashion. There is little left of those earliest works; it took time to convert the natives and to colonise enough Spaniards to permit of any great development of architecture in this period. The great era of church-building began in the seventeenth century, when Spain was creating a new Baroque style of her own, which soon merged with the fantastic Churrigueresque; and this mixed style, with all its wild extravagances, interpreted and modified by the native Indian taste, characterises the façades and altars of most of the largest and finest churches of South America, Mexico and our south-western states. Vestiges of the classic tradition, however, survived even into the eighteenth century. The great cathedral of Mexico was begun in 1573,

but it was almost wholly built between 1626 and 1656, and its ornate Sagrario, by the architect Rodriguez, was not begun until 1749 and finished in 1768. La Muced at Lima, the Sagrario at Mexico, the façade of the church of Chihuahua, the Mission of Xavier de Bac near Tucson, Ariz., and that of San Jose in Texas may be cited as varying examples of the American Churrigueresque, together with countless *retablos*, shrines and altars in these and other churches and missions. The first missionary to any United States territory was Marcos de Niza, who came to New Mexico in 1539. He was followed by other Franciscans, Dominicans and Jesuits. The first missions in New Mexico were, however, not built until 1630; those in Lower California in 1683; Arizona, 1690; California not until 1768.

III

What, now, do we owe to these Spanish-American works and their creators? What do they offer for our instruction and inspiration?

First of all, I think, an excellent example of adaptation to a special environment, as suggestive for the regions they occupied as the adaptation in the north, by the English colonists, of their English precedents to construction in wood. The Hispanic-Americans built of stone, coquina, brick or adobe according to circumstances; carved the stone or moulded the stucco; employed native artisans where they could; and thus produced an architecture which, derived from Spain, was nevertheless thoroughly localised for the region in which it was created.

Secondly: *Examples of florid decoration skilfully applied.* Whatever one may think of the Churrigueresque as a style, one has to admit the cleverness, the ingenuity, the freedom, the decorative richness of its treatment, and, underlying all its lawlessness, a certain soundness of composition and distribution and a certain fitness of means to end and to environment. The Spaniards understood, both in Spain and in America, the value of contrast; the contrast of large, broad areas and masses of plain wall, with concentrated areas of rich ornament; and it is the restraint and simplicity of the first that give value to the second.

Thirdly: in the Missions of California, where the resources were small, they learned and have bequeathed to us the lesson of simplification. If Mexico and Texas exemplify the possibilities of concentrated extravagance, California offers the lesson of picturesque simplicity; and that is a lesson which Americans need, perhaps, even more than the other. Yet both are needed. We have thus from Spain suggestive examples both of how to use rich ornament wisely, and of how to do with little or no ornament. We may thank Spanish art for both suggestions.

IV

It is interesting to observe the way in which American architecture has made use of these suggestions. I believe the earliest example of direct inspiration from Spanish models is the group of buildings by Carrere and Hastings in St. Augustine—the Ponce de León and the Alcazar. These were built in Mexico City and the church at Chihuahua, while the dome of the San Diego building recalled the brilliant tiled dome of the shrine at Guadalupe. I find I have omitted the earliest of all our American derivations from Spain—the central tower of Trinity Church at Boston by Gambrell and Richardson, dating from 1876 and derived from the *cimborio* of the Old Cathedral at Salamanca. I should also have mentioned the Rice Institute in Texas by Cram and Goodhue, of the date of 1905.

In New Mexico we find another inspiration—that of the Pueblo-Spanish architecture, which is now receiving scientific and artistic study, in which the late Mr. A. F. Baudelier was a pioneer, Mr. Lummis a devoted pursuivant, and Mr. Hewett still an enthusiastic advocate and guardian. The museum at Santa Fe and a number of houses in the adobe style testify to the possibilities of its adaptation to modern uses in that environment.

V

I have devoted myself chiefly to architecture as the most important field of Spanish art influence among us. But I am, of course, not ignorant of the debt which American art, in common with that of other nations, owes to the great Spanish Schools of Painting of the sixteenth to the eighteenth centuries. The names and works of El Greco, the immortal Velasquez, Zurbaran and Goya, are familiar to every American painter and student, while in our own day Sorolla and Zuloaga have enriched our galleries and opened our eyes to uses of colour, expressions of light and atmosphere, and vigorous delineations, peculiar perhaps to the Spanish temperament, but suggestive to any painter whose mind and eyes are wide open to learn from others.

There is also the whole field of applied and industrial art in furniture, metalwork and textiles, in which the Spanish exu-

* A paper prepared for and presented in special session of the Thirteenth Annual Convention of the American Federation of Arts held in the Pan-American Union Building at Washington.

berance and love of ornament have supplied manifold products of great artistic interest. Little by little we are coming to appreciate the Spanish resources in these fields: the rejas in the churches, the richly carved furniture, the splendid velvets enriched with applique-work and embroideries in gold and silver thread, the laces and the tiles of Spain; the Hispanic Museum in New York, the books of Prentice and Byne and Stapley, of Marrion Wilcox and others; the Spanish books now being multiplied in our public and private libraries; the Moorish objects, the tiles and textiles, the fragments of altars, shrines and sillerias in our museums; the increasing tides of travel and commerce between our country and the Spanish world on both sides of the ocean—all these are contributing to the gratifying increase of our artistic debt to Spain and to an appreciation of that debt. Last of all these agencies, not because least but because nearest to us, I name the Pan-American Union and the beautiful building in which it is housed, in which Professor Cret and his able partner, Albert Kelsey, have so fully recognised and so delightfully and worthily expressed the debt of American art to the art of Spain.

London University: Bartlett School of Architecture.

The first term at the above school will be from Monday, October 2, until Wednesday, December 20.

In connection with the courses of study there will be evening courses in Design and Academic Design under Professor A. E. Richardson, F.R.I.B.A., with Mr. Ernest P. B. Musman, B.A., A.R.I.B.A. as Studio Instructor.

The Evening School in Architectural Design will be open every evening during term time (except Saturday), from 6 p.m. to 9 p.m., beginning on Monday, October 2, 1922.

These courses are arranged in order to encourage the study of design among students engaged in offices during the day. Periodical lectures will be given on the principles governing the design of all types of modern buildings, special attention being given to conception and planning.

Professor Richardson will supervise the courses and will attend one evening a week to criticise the designs.

Students taking these courses will be given special facilities to study from the life; also the Library of the School and its collections of historical drawings and architectural models will be available for their use.

Fees: Session, £12 12s. Term, £4 14s. 6d.

Intending students should apply for entry forms to Mr. Walter W. Seton, M.A., D.Lit., F.S.A., Secretary, University College, London (Gower Street, W.C.1), and should attend on October 2 at 5.45 p.m. in the Bartlett School of Architecture, Gower Street, W.C.

An Atelier for the study of Advanced Architectural Design has been organised. Professor A. E. Richardson, F.R.I.B.A., will have Mr. James Burford, A.R.I.B.A., as Assistant.

The new building in Malet Street for the Atelier, presented by Messrs. Goodman and Lorden, will be available.

The Atelier will be open to those who have obtained the degree of Bachelor of Arts (Architecture) in the University of London, to those who have obtained the Certificate of Architecture of the School, and to others who have reached a standard of efficiency approved by the Director.

Applications for admission, accompanied by statements of qualifications, should be sent to Professor Richardson as early as possible.

The qualifications of each applicant for the use of the Atelier are considered by Professor Richardson and submitted for the final approval of the Provost.

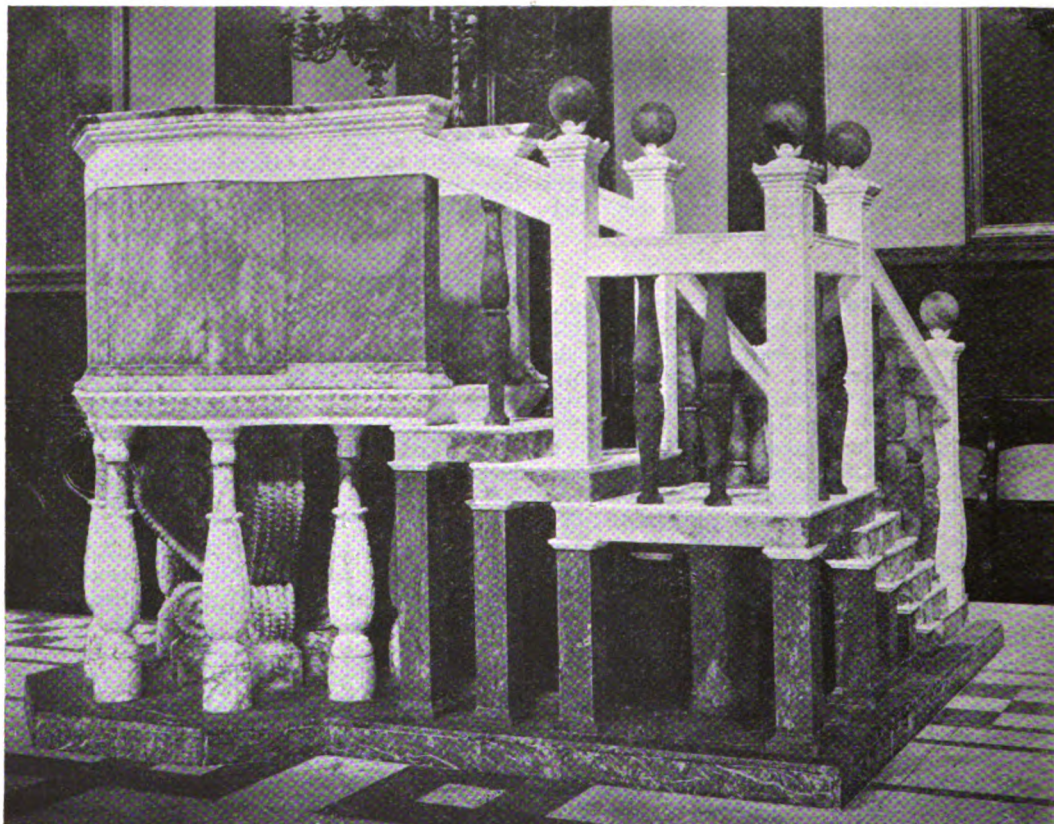
Each member of the Atelier is required to sign an undertaking to comply with the rules and regulations in force for the time being.

Subjects will be set once a month, and the finished schemes are judged at the end of each month.

There will also be 12-hour subjects, and other competitions.

Fees: Annual subscription for membership, £1 1s. Fee for each monthly subject, £1 11s. 6d.

Members of the Atelier will be required to provide their own Boards, T-Squares, and Drawing Materials.



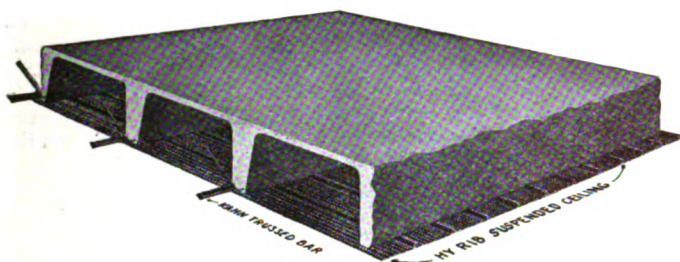
PULPIT, GREEK CHURCH, MANCHESTER. PAUL OGDEN, F.R.I.B.A., Architect.

This pulpit has been erected in marble from the design and details of Mr. Paul Ogden, F.R.I.B.A., Manchester. The work was carried out by the local firm of sculptors and marble workers, Messrs. J. and H. Patteson, of 96 Oxford

Road, under the personal supervision of the architect. The pulpit was presented to the Greek Church by Mr. A. E. Demetriadi, as a thank-offering for his safe return from the war.

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And at LIVERPOOL.

Manchester Town Planning Exhibition.

The programme for the exhibition and conference promoted by the Manchester and District Joint Town Planning Advisory Committee has now been completed. Over seventy county boroughs, municipal boroughs, urban and rural district councils adjacent to the city are represented on the committee, and the exhibition promises to show how they are working together in the matter of town planning, control and development. Among the exhibits will be maps indicating the historic growth of Manchester and surrounding towns, others depicting the effect of town-planning principles, and again more illustrative of various municipal services, of densities of population, of industries, and of the influence of smoke. Maps, diagrams and models from towns throughout the country and from America and continental cities are also to be exhibited.

Lord Derby will open the exhibition, the scene of which will be the Town Hall, Albert Square, on Monday, October 9, with the Lord Mayor (Councillor E. D. Simon) presiding, supported by Alderman T. Turnbull, chairman of the Manchester Town Planning Committee and likewise of the Joint Advisory Committee. The exhibition will remain open until the evening of Saturday, October 14, and admission is free. During the period of the exhibition there will be conferences. Appended is a list of speakers and subjects:—

October 9.—Mr. H. H. Humphries, City Engineer and Surveyor of Birmingham, "Town Development and Reconstruction."

October 10.—Morning session, Sir Henry Maybury, Director-General of Roads, Ministry of Transport, "Arterial Roads and Town Planning," chairman, the Mayor of Rochdale (Alderman Samuel Diggle). Afternoon session, Professor P. L. Abercrombie, Liverpool University, "Regional Town Planning," chairman, the Mayor of Stockport (Alderman Charles Royle). Evening session, Mr. Ebenezer Howard, pioneer of the garden city movement, "Garden Cities and Satellite Towns," chairman, the Mayor of Chorley (Alderman J. Fearnhead).

October 11.—Morning session, Mr. F. M. Elgood, late Regional Housing Commissioner, "Town-Planning Schemes," chairman, the Mayor of Rawtenstall (Councillor James Barritt). Afternoon session, Mr. George L. Pepler, Chief Town-Planning Inspector, Ministry of Health, "Progressive Town Planning," chairman, the Mayor of Salford (Alderman George Barker). Evening session, Mr. E. G. Culpin, honorary secretary, International Garden Cities and Town-Planning Association, "The Sociological Aspect of Town Planning," chairman, the Mayor of Middleton (Councillor W. B. Scott).

October 12.—Morning session, Mr. I. G. Gibbon, assistant secretary, Ministry of Health, "Zoning," i.e.: the allocation of land for particular uses, chairman, the Mayor of Eccles (Councillor George Thompson). Afternoon session, Mr. Thomas Adams, Town-Planning Adviser, Canadian Government, "Town Planning Necessary for Industrial Efficiency."

October 13.—Morning session, Professor S. D. Adshead, London University, "Imagination in Town-Planning," chairman, the Mayor of Bury (Alderman C. Sanderson). Afternoon session, Alderman T. Turnbull, "The Work of the Joint Committee," chairman, the Mayor of Darwen (Councillor T. W. A. Forrest).

The hours during which the exhibition will be open are from 10 a.m. to 9 p.m. daily, except on the Thursday and Saturday, when the closing hour will be 7 p.m.

"The Architect" Fifty Years Ago.

SEPTEMBER 28, 1872.

THE CHARTERHOUSE.

The boys of the Charterhouse School have just re-assembled in their new abode at Godalming. The school buildings are finished according to the original plan, including school-room, lecture-rooms, dormitories, &c., and the only part which still remains uncompleted is the chapel, the walls of which are now rising rapidly to the top of the windows. It is expected that the chapel will be roofed by the end of the term, and that it will be consecrated by the Bishop of Winchester early next year. It is about 118 feet long by 40 feet broad, and calculated to hold 500 boys, with a side aisle for the accommodation of the masters' families, servants, &c. Its windows will be adorned with flowing tracery, each window differing in details; and it is hoped that all the windows will be filled with painted glass.

The Ministry of Health have granted formal sanction to the Liverpool Corporation to borrow £235,000 for the purchase of the site of St. Peter's Church. It is stated that the Woolworth firm have made an offer to the Corporation for the site as it will be when the street improvement scheme has been carried out.

A New Note in Decorative Woodwork.

Many of our readers will remember the exhibit of Messrs. Rippers, Ltd., of Castle Hedingham, Essex, and 165 Gray's Inn Road, London, at the Building Trades' Exhibition of 1921, when they put before the public some beautiful specimens of manufactured woodwork prepared from Elm Grey Wood (William's Patent). It was seen by Messrs. McDougall, the Scottish firm of Parquetry and Block Floor layers, who as a result prepared a panel of this Grey Wood in parquetry for exhibition at Kelvin Hall, Glasgow, in the following October. The possibilities for decorative effect attracted the attention of Mr. Hamilton Scott, architect, of Glasgow, who entered into a contract with Messrs. Rippers for the supply of panelling and fittings for new tea rooms, which he was designing, in that city.

On August 23, on the invitation of the proprietors, Messrs. Persechini and Boni, many prominent Glasgow residents, together with Mr. Hamilton Scott, the architect, and Mr. H. T. Ripper, of the firm of contractors, sat down to an informal luncheon in one of the saloons of the new Tea Rooms.

Baile McDonald, who was accompanied by various members of the Glasgow Corporation, occupied the chair, and in declaring the Rooms open, congratulated the proprietors on their enterprise, the architect on the application of real art in the fitting up of a building which would be the means of education as well as a delight to the citizens of Glasgow who would in the future use these rooms for entertainment and refreshment, and the contractors for the able way in which they had carried out the work.

The rooms are situated in the very heart of the City (19A, Renfield Street), and consist of entrance hall with staircase leading to a ladies' gallery on the mezzanine floor and to two saloons on the first floor, all of which are beautifully panelled in Elm Grey Wood.

The panels are all in quartered veneer with black mouldings and finishings. The back saloon is fitted at one end with a tea gallery and at the opposite end with a musicians' gallery. The ceiling of this room is pierced by a number of circular panels filled with leaded lights, and the remainder panelled in Grey Wood.

The only exception to this treatment is the front saloon on the first floor, and which is in the strongest contrast, being a representation of a Chinese room. This has been cleverly hand painted by Mr. G. Coakley.

The whole scheme has fully justified the architect's conception, and is well worth a visit from artists, designers, architects, and those members of the public who are interested in the evolution of good craftsmanship and design applied to the needs of modern commercial and domestic life.

An Essay Competition

The Architects' and Surveyors' Assistants' Professional Union is offering a prize of Five Guineas for a short essay on:—

"The true function of the Technical Assistant in the Building Industry."

The conditions are as follows:—

1. The competition is open to all professional and technical workers associated with the Building Industry.
2. Essays must not exceed 1,000 words in length, must be on foolscap paper, and written on one side of the page only.
3. Essays must not bear any mark which might identify the writer, but must be accompanied by a sealed envelope containing the name, address and occupation of the competitor and the business address of his firm or employer.
4. All essays and sealed envelopes must be forwarded, under cover, marked "Competition" on the outside, to the Secretary, Architects' and Surveyors' Assistants' Professional Union, 36 Victoria Street, London, S.W.1, not later than October 31, 1922.

The result of the competition will be announced in this Journal in due course.

Camberwell Borough Council propose, with the sanction of the Minister of Health, to demolish five insanitary areas. There are 67 houses altogether, and about 310 persons will have to be rehoused. The Minister of Health provisionally approves of the scheme.

An exhibition of designs prepared by students of "Recognised" Schools who have qualified for exemption from the Final Examination of the Royal Institute (with the exception of that portion which relates to Professional Practice) will be held in the R.I.B.A. Galleries, 9, Conduit Street, W.1, from Friday, September 29 to Friday, October 6, 1922 (inclusive), between the hours of 10 a.m. and 5 p.m.; Saturday, 10 a.m. and 1 p.m. On this occasion the Board of Architectural Education will award, for the first time, a silver medal for the best set of designs submitted. The exhibition should prove of the greatest interest to students and to those who are concerned for the future of architectural education.



AUSTRALIA HOUSE.
A. Marshall Mackenzie & Son, F.F.R.I.B.A.
Architects.

From an original Etching by
Christopher M. Shiner.

REDPATH BROWN & CO. Ltd.

CONSTRUCTIONAL ENGINEERS,

3 LAURENCE POUNTNEY HILL, E.C.4

WORKS AND STOCKYARDS

LONDON
Riverside Works,
East Greenwich, S.E.

MANCHESTER
Trafford Park.

EDINBURGH
St. Andrew
Steel Works.

GLASGOW
Westburn, Newton.
Office: 19 Waterloo St

BIRMINGHAM
Office :
47 Temple Row.

NEWCASTLE-ON-TYNE
Office :
Milburn House.

REGISTERED OFFICES: 2 St. Andrew Square, EDINBURGH.

General.

The possibility of erecting a public library at Sidmouth is being considered.

Okehampton Castle has been scheduled by the Office of Works as an ancient monument.

A Wesleyan mission hall, costing between £30,000 and £35,000, and with a seating capacity of between 1,600 and 2,000, is to be built in Attercliffe, and it is hoped to lay the foundation-stone in the spring of next year.

The Master of Works in Glasgow has been instructed by the Corporation Statute Labour Committee to invite designs and estimates for the erection of a ferro-concrete bridge across the River Clyde at Oswald Street.

Messrs. Lawder and Cetti, architects, of Birmingham and Dudley, have prepared plans for the erection of a cinema at the back of the present Criterion Picture House in High Street, Dudley, at an estimated cost of £15,000.

Perth County and City Royal Infirmary will, it is understood, benefit to the extent of £60,000 under the will of the late Mr. John Graham, farmer, Methven. It is anticipated that several needed improvements will now be carried out.

The Newcastle Corporation Housing Committee recommend the City Council to sanction the Rochester Street scheme for the erection of 340 houses of the Sutton dwelling type being proceeded with, as well as a further instalment of 200 dwellings on the Walker estate.

The Sussex Archaeological Society are being asked by the Lewes Education Committee to grant facilities for classes of senior scholars attending the elementary schools to pay occasional visits to the Castle and Museum, in charge of a teacher, for instructional purposes.

The Bishop of Lichfield, speaking in Lichfield Cathedral, made a strong appeal on behalf of the fund for saving the spire of Clifton Campville Church, near Tamworth. Few churches in Staffordshire, said Dr. Kempthorne, were more beautiful. The body of the church had recently been repaired at a cost of over £3,000. Now the tower and spire, perhaps the finest specimen of pure Decorated work in the diocese, were in actual danger.

Sir Lawrence Weaver will shortly relinquish the post of Second Secretary and Director General of Land Settlement at the Ministry of Agriculture in order to take up the appointment of director of the art and agricultural sections of the British Empire Exhibition (1924). In view of the approaching completion of the land settlement scheme and of the reduction in the work of the Ministry owing to the repeal of Part 2 of the Agriculture Act, it has been decided that the vacancy shall not be filled.

Mr. R. Coppock, general secretary of the National Federation of Building Trade Operatives; Mr. George Hicks, president of the Federation; and Mr. J. Walsh, vice-president, have been appointed as British delegates to the International Building Trades Conference, to be held at Vienna on October 2, 3, 4, 5, and 6. It may be remembered that the National Federation of Building Trade Operatives affiliated themselves to the International Building Trades Federation at their recent annual conference, held at Bangor.

Reference was made to the rebuilding of the Bank of England at the half-yearly court on the 21st inst. Mr. Thomas Fisher, a stockholder, said they had heard a great deal about the rebuilding of the bank premises, and he wished to assure the directors of the stockholders' confidence in their plans in connection with that great and necessary step. Mr. Trotter, the Deputy Governor, who presided, said the rebuilding of the Bank would be an onerous task. They would endeavour to carry it through in accordance with the highest traditions.

At a meeting of the trustees of the Bowes Museum, Barnard Castle, on the 15th inst., it was reported that the Earl of Strathmore, on the dismantling of Streatlam Castle, had presented to the institution a portrait of the late Countess Montalbo, foundress of the museum, and wife of his ancestor, Mr. John Bowes, painted by L. W. Desanges in 1853. The portrait has for its background a very faint outline of Glamis Castle, Forfarshire, the ancestral home of the Bowes-Lyon family. An account of the Bowes Museum was given in "The Architect" of September 8.

Mr. W. Hilton Nash, F.R.I.B.A., of the Arts Club, 40 Dover Street, W., in a letter to the "Morning Post" says:—"As we are soon likely to have alterations made to Sir John Soane's greatest work, the Bank of England, I think it may be well to call your attention to Sir John Soane's tomb in old St. Pancras Churchyard. It is in a sad state of repair, and some time ago I, in conjunction with Mr. William Woodward, tried to get it repaired, but without success. The tomb was designed by the architect himself, and calls to mind in some measure the details employed in the Bank of England. As Sir John's works are so well known and esteemed, it seems wrong that the monument which covers his remains should be neglected."

Trade Notes.

Messrs. John Laing and Son, Ltd., contractors, have been compelled, owing to their rapidly increasing business, to remove their offices from Lincoln's Inn Fields to more commodious offices at Lincoln House, 296, High Holborn, W.C.1.

The Ruberoid Co., Ltd., request us to announce the removal of their offices from Knightbridge Street, E.C.4, to Lincoln House, 296-302, High Holborn, W.C.1. Their telephone numbers will be Holborn 3001 and 3002.

Wm. Wadsworth and Sons, Ltd., Bolton, have spared neither pains nor expense in the compilation of their catalogue "E. L. 50" which deals solely with their electric lifts. This long-established company also make belt-driven lifts, transporters, friction hoists, hand-lifts, and cranes. In the catalogue under notice they mention with justifiable pride that fully 50 per cent. of their business consists of repeat orders. About one half of the 56 pages are given up to letterpress, the rest to illustrations of various installations.

The Redaluma Paint Co., Ltd., 1, Lloyd's Avenue, E.C.3, have issued a booklet descriptive of the protective paint "Alredma," of which they are the sole manufacturers, and setting forth their arguments for its use in place of red lead. The points against the latter are its cost, its great density, and its poisonous effects. Among the claims for their oxide of aluminium is that it is non-poisonous, anti-corrosive, acid-resisting, non-setting, light in density, of great covering capacity, and extremely impervious both to rough usage and extremes of temperature. Besides being an admirable covering for metals it is also being used by the building and decorating trades for brickwork, concrete, plaster, and woodwork, both inside and outside.

Messrs. Fredericke and Whitworth, 108, Draycott Avenue, Chelsea, S.W.3, are offering to buy at the best prices genuine old stuff like panellings, mantelpieces, carved woodwork, stained glass, etc. At the "Antiquity Shoppe" they are always ready to show bargains in those lines.

Messrs. Smith and Wellstood, Ltd., have issued from 11, Ludgate Circus, E.C.4, a very practical booklet on the principles which should govern the arrangement of ranges, stoves, and water heaters for bungalows. This is not a mere catalogue. The firm, out of their long experience, have come to the conclusion that in many bungalows much money is wasted upon brick flues and the forming of brick recesses which could be saved by the use of portable heating and cooking stoves. But the best use of the latter would, of course, have to be in conjunction with an improved method of flue construction. The practice of designing four chimney shafts in one stack is not recommended. Instead, it is advised that a chimney stack of two shafts should serve two fires, or, if closed stoves are used, let one shaft serve two fires. Messrs. Smith and Wellstood hold a great record as manufacturers of this class of goods, and their booklet, with its numerous diagrams, is well worth study.

Gianese cav. Angelo and Co., of 518, S. Chiara, Venice, have, with great enterprise, produced in English an excellent book of nearly forty pages descriptive of their mosaic manufactures. These are to be found in North and South America as well as in many European countries. By means of the numerous photographs an excellent idea can be obtained of the high quality of their architectural work.

Repair work, which is taking place on the famous crooked spire of Chesterfield Parish Church, has led to a test being made by Mr. A. W. Cooke to ascertain whether the deviation of the spire from the perpendicular is becoming more pronounced. According to his report, the spire leans 7 ft. 6 in. to the south, 7 ft. 10 in. to the south-west, and 3 ft. 2 in. to the west. From this it would appear that the spire is 12 inches more out of plumb than it was in 1842, when Sir Gilbert Scott made an examination. Records show that at various times in the last 200 years there have been rumours as to the unsafety of the steeple, which Dr. Cox believes to be of the same age as the tower, between 1350 and 1370. Mr. Leslie Moore, F.R.I.B.A., has now presented a report of his recent examination of the spire. While pointing out that there is no immediate danger of the spire falling, Mr. Moore states that much of the oak timbering under the lead sheathing is in a decayed condition, and he suggests that no time should be lost in replacing the woodwork where faulty, so as to prevent any further "twist" developing, and also to strengthen the spire. The report also draws attention to the unsatisfactory and unsafe condition of much of the stonework in the tower. An appeal will shortly be issued to the public for funds to defray the cost of the restoration work. This expenditure is estimated at £1,500 at the least.

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Architecture and Railways.

The architecture of railway companies in this country is an outcome of the manner they have been treated by the public as expressed in railway legislation. They have been restricted to certain functions as common carriers, and have been allowed no latitude or scope in other directions. A railway company as a company may not own and develop land save that intended for such purposes as a station and its accessory buildings. In England the railway companies have had to construct their lines at a maximum cost, paying a heavy price for any ground acquired. In America and other countries they have received grants of lands on either side of their tracks, the prices obtained for the development of which has gone towards the expense of constructing lines. It is not claimed that the two cases are entirely analogous, for in England the companies were constructing lines through populated districts, while abroad they were frequently opening up new undeveloped country. Still, broadly speaking, legislation may be said to favour railway companies abroad and to penalise them here.

The fact that a railway company here must *per se* be a common carrier and nothing more has, we believe, a direct influence on the character of its buildings, and one which is generally regrettable. If in entering a town or other locality the companies had had powers to acquire more land than was needed for their lines and stations, they would in many cases have found it advantageous to use their facilities with the inevitable result that they would have called in architectural skill either in the form of an architectural staff of their own, or of independent architectural advice, and such professional skill would almost inevitably have been utilised in the design of station buildings, which should usually fall more nearly within an architect's province than that of an engineer. As it is, the building work of a railway company in this country usually bears evidence of its purely engineering parentage. The public amenities of towns and country suffer because the building work of the railway companies is often of the first prominence and importance. There are exceptions to the defects we mention, but they are few and far between, the later developments of the Metropolitan Railway being a case in point.

Just as some of our leading banks show a tendency to encourage quiet and characteristic architectural treatment because no doubt their directors consider it good business, the Metropolitan Company, with which is connected a large estate business, does show an interest in matters architectural.

We believe the association of the railway companies with estate development is one which is worthy of encouragement in the public interest, and should be glad to see legal disabilities swept away, because it seems to us that railway companies are far more likely to consider the interest of districts in which they hold property than that through which they merely carry passengers, nor need there be any real fear that they would abuse their powers as has been the case in

Western America, where the original powers granted have been so extensive as to give the companies complete control of other activities.

Naturally safeguards would have to be enforced which would prevent the companies acquiring land to withhold it from development until its value had risen to a high figure, and it would be reasonable and proper to require a railway to provide a certain amount of accommodation for the working classes in any development scheme, and to obtain the approval of the Ministry of Health or some other legal authority to the lines of any scheme laid down.

It would seem that these and other reasonable precautions being taken, nothing but good could arise, for if a private speculator develops, his interest too often ceases when development finishes, or at an intermediate stage when he finds he can get rid of his estate at a profit, while a railway company would have a more permanent interest in the future of the land through which its line passed, and also has ready-made facilities for making its enterprise known. A certain amount of the profits made might reasonably be employed in cheapening transit rates.

The architectural treatment of the great terminal stations is, of course, of the first importance, but of even greater is the design and arrangement of the hundreds of smaller stations throughout the length and breadth of the land. They for the most part are unsightly, while often they have not even the negative advantage of cheapness.

After all, the public spend no inconsiderable time in railway stations, and their pleasantness and convenience are of importance, and their improvement would follow were competent architectural advice employed. The bridge over a line also at a station involves the simplest of engineering problems, and which could readily be dealt with by any competent architect, while they could be so designed as to be pleasing instead, as is often the case, repellent features. It is not until the great bridges, viaducts and tunnels which have to be constructed over and under the permanent way have to be considered that engineering skill is really required; the remainder of the work wanted is architectural rather than engineering, and should be so regarded.

In the interests of the public, and to improve and preserve the beauty of the country, it is advisable that architectural help should be invoked, and would, we believe, be utilised by the companies could they receive larger and freer charters to define their functions.

The amenity of small country and suburban stations might be easily increased to an appreciable degree by a systematic encouragement of flower beds, creepers, and other similar aids to covering their nakedness. The stark utilitarianism of a wayside station usually renders it an eyesore in any landscape. It may be too much to hope that companies will reconstruct their premises solely to gratify æsthetic tastes. But they can improve them at a negligible expense.

Our Illustrations.

THE JEHANGIR KOTHARI PARADE AND LADY LLOYD PIER, CLIFTON, KARACHI, SIND.
E. B. HOARE (HOARE & WHEELER), Architect.

The Jehangir Kothari parade at Clifton, near Karachi, was constructed by the municipality on land which was given by Sir Jehangir Kothari, a well-known Parsi landowner. The main architectural features are carried out in Jodhpur (Rajputana) stone, and the balustrading and walling in a local stone from the Ghizri quarries.

Between the sea and the parade are sand dunes of inconvenient formation, and the flat sand was formerly approached by an inadequate causeway constructed with iron and wood planks.

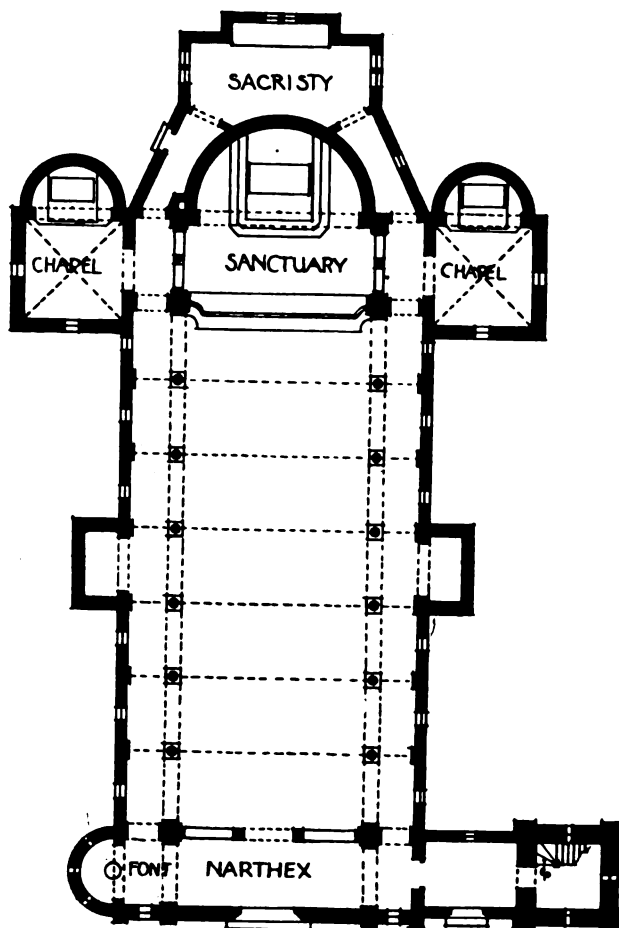
Sir Jehangir Kothari generously presented, at a cost of three lakhs of rupees (about £20,000 sterling), the causeway

leading to the flat sand and the pavilion at the termination. This causeway is called after Her Excellency Lady Lloyd, wife of the Governor of Bombay from whose inspiration the scheme was inception.

The causeway is built on reinforced piles and arches, the construction of which was carried out by Messrs. Gammon & Co., of Bombay, and the stonework was obtained from the quarries above described.

The whole scheme was designed by Mr. E. B. Hoare, F.R.I.B.A., of Messrs. Hoare and Wheeler, of 22 Portman Street, London.

CHURCH OF THE SACRED HEART AND ST. CATHERINE, DROITWICH. MESSRS. PEACOCK & BEWLAY, Architects.



The Church of the Sacred Heart and St. Catherine has recently been erected at Droitwich from the designs of Messrs. Peacock & Bewlay, architects, Birmingham.

The general design is a modern interpretation of the early Christian basilicas, and is founded on those in and around Rome and Ravenna.

The main body of the church consists of nave with passage aisles, a narthex with gallery over, and a sanctuary, the latter having an apsidal termination around which are grouped the chapels and sacristy. There are also two confessional recesses off the side aisles, and a baptistry adjoining the narthex.

The walls have been treated externally with rough faced bricks of varying tones and internally with rough plaster. The roofs are covered with Italian and Tubular tiles. The aisle floors are paved with brownish buff quarries and the sanctuary floor with marble.

The nave arcades are formed with unpolished grey granite columns with stone caps and stilted blocks. The arches between the sanctuary and aisles are carried by Swedish marble columns and the space over is finished in mosaic. The walls and vaulted roof of the chapel on the Epistle side have also been decorated with mosaics illustrating incidents in the life of St. Catherine, these having been designed by Mr. Gabriel Pippet, of Oxford.

Messrs. J. Parnell & Son, Rugby, were the builders, and the following were the various sub-contractors:—E. P. Blockley, Hadley, Salop—facing bricks; Messrs. Harvey & Ashby, Birmingham—casements; Trussed Concrete Steel Co., Ltd., 22 Cranley Gardens, South Kensington, S.W.7—concrete construction of domes; Messrs. Horrell and Bowman, Birmingham—door and window furniture; Messrs. Acme Paving and Flooring Co., Gainsborough Road, Victoria Park, E.9—flooring; Messrs. Couzens & Akers, Birmingham—heating and ventilation; Messrs. Harvey & Ashby, Birmingham—lead lights; Messrs. Fenning & Co., Palace Wharf, Hammersmith, W.—marble work; The Birmingham Guild, Birmingham—ornamental metal work.

Notes and Comments.

The London University Site.

Sir Edwin Lutyens, in the "English Review," makes out a very good case for the selection of the Millbank site for the London University, and apart from its suggested cost it seems to us to have everything in its favour as compared with either the Bloomsbury site or that of Holland House. It is a mystery to us why the London University should have been "bludgeoned" into acceptance of the Bloomsbury site by the Government, but as no building is likely to be commenced for some time the rescinding of an unwise decision should not be insuperable. True, the Bloomsbury site is conveniently near University College, while its proximity to the British Museum is a point in its favour,

but these seem to us quite counterbalanced by the fact that Millbank is adjacent to St. Thomas's Hospital. A great medical school is no small part of any modern university and is likely to become one of even greater importance in the future, while the bisections of the Bloomsbury site by a number of existing roads is for University purposes "uncomfortable."

Sir Edwin suggests that Lambeth Bridge is condemned and that the bridging of the river from north to south in connection with the two parts of the proposed site might form an integral portion of any university scheme and would help in the composition of a magnificent range of buildings which would beautify London.

Madrid.

Madrid is said to provide an admirable field for the enterprising contractor as its growth has been steady and the demand for offices in the centre of the city has relegated many families to outside districts which are inadequately served by tram lines and means of communication. Tenements and dwelling houses have been destroyed to make room for the extension of the East and West Gran Via, facing which large business premises and palaces have been built. The rents paid for accommodation are very high, £12 and £20 a month being willingly paid for small flats, while many families able to pay rents of £6 to £8 a month are forced to live in cellars.

Building is expensive, materials not having fallen so much in price as other commodities, while labour conditions are difficult and frequent strikes have taken place. The municipality has recently canalised the river Manzanares and have constructed a circular boulevard enclosing new streets and avenues on the north-east side of the city, which is the healthiest quarter, and here building sites provided with water, gas and electric light are now plentiful.

Barking Court House.

A letter signed by Philip Norman, T. H. Curling, the Hon. Secretary of the Essex Archaeological Society, and Thackeray Turner to the "Times" protests against the proposed demolition of the Barking Court House and Market Hall erected by Queen Elizabeth for the people of Barking. The unpretentious court house stands over an open market hall, is 37 feet by 14 feet, and together with a Justices' Room, occupies the first floor, while the roof contains a room formerly used as a school room. It is stated that it would cost only some £500 to place the building in a complete state of repair, and the London Survey Committee, the Essex Archaeological Society, and the Society for the Protection of Ancient Buildings have decided to appeal to the public for funds to repair it, any donations to which should be sent to Mr. Percy Lovell, the Secretary of the London Survey Committee, 27 Abingdon Street, S.W. As the building does not impede surrounding traffic there would appear to be no reason for the destruction of a building which might be put to many good purposes, while it forms an interesting memorial of the past. But Barking is a poor and heavily burdened locality, and it is evidently necessary to appeal for outside help.

The Rent Restriction Act.

In a paper by Sir Kingsley Wood read at one of the provincial meetings of the Law Society at Leeds the speaker said that the Rent Restriction Act should be repealed as speedily as possible in its entirety. But it would be necessary for an amending Act to be passed to remedy the injustice which had occurred and which should be dealt with during the continuance of the Act. Agents of either landlords or tenants who imposed extortionate premiums for houses or flats should be made liable to penalties for contravening the law. In the case of subletting at a profit landlords were not treated fairly, and it was proposed that landlords should be entitled to a definite further increase of rent where houses were in the occupation of more than one family, or as an alternative that they should have the right to ask a County Court judge to fix the rent. As to service flats in London, where the rent included payment in respect to board, attendance, or the use of furniture, a fair and full definition of the meaning of "attendance" was required. The fact that these and many other difficulties have arisen is a proof of the impossible task of those who try to frame laws dealing with the intimate and personal questions arising out of the operation of economic laws.

The Fly in the Ointment.

A very curious case came up for hearing before the Birmingham County Court which arose out of a claim on the part of Mrs. Hall-Wright against her neighbour and incidentally her sub-landlord for breach of covenant in that he had not observed the covenants contained in the indenture of a lease by which he was bound to paint his house externally every three years. Mrs. Hall-Wright's contention was that by his default in so doing her house,

on which she had expended considerable sums, was prejudicially affected; but it was decided that so long as the sub-landlord satisfied the head landlord such a charge could not lie, so the action was dismissed. We can quite understand Mrs. Hall-Wright's point of view, as it is quite clear that the value of property is affected by shabby and untidy surroundings; but such difficulties are not easy to meet, and since the war there has been a general neglect of external amenities. We probably have quite enough "municipal" interference with our lives, otherwise it might not be a bad thing if the owners of houses in our towns could receive an occasional whip-up on the subject of the upkeep of their premises.

The History of the Mansion House.

"The History of the Mansion House," written by Mr. Sydney Perks, F.S.A., and published by the Cambridge University Press at the price of 35s., forms a careful record of the documentary and other evidence relating to the central area of the City now occupied by the Mansion House. It is divided into sections dealing with:—The Walbrook—The Stocks Market—Market Rents and Tenants—St. Mary Woolchurch-haw—St. Stephen, Walbrook—The Statue—The Stocks Market after the Fire—The Surveys after the Fire—Purchase of Property—The Plans for the Mansion House—The Building of the Mansion House—Work during the Nineteenth Century—The Rooms in the Mansion House. The Dance Family—Appendix I. Sheriffs' Fines—Appendix II. The Re-building of London after the Great Fire of 1666—Index—Plans. It is copiously illustrated with a careful selection from original drawings and plans of the City at different dates, so that it forms a useful and valuable record of a historic site which has a definite archaeological value. Books of this nature represent an amount of careful and painstaking work which cannot be merely estimated by their size.

"The Architect" Fifty Years Ago.

OCTOBER 5, 1872.

CLASS DWELLINGS.

Apart from the very different question of the unwholesome and vile condition of the dwellings of the improvident and intemperate in the disadvantageous atmosphere of our great towns, the reflections which arise in the mind of well-informed philanthropists with regard to the mere shortcomings of labourers' cottages in the country are not of such a kind as to involve reproach to the upper classes of the community as a whole. No doubt there are certain estates upon which the landlord has built what he proudly calls "my cottages" in a spirit of emulative beneficence so regardless of the rules of investment that other estates are considered to attach discredit to the character of their owners by reason of the absence of such enticing advertisements; and no doubt in many cases the possession of those models of accommodation confers upon the honest yokel's thrifty wife the opportunity of making a display of her neat-handed ways which it is amazing to contemplate, whether from without or from within her little circle; but as a rule amongst country labourers throughout the land, the tidy people have tidy homes, and the untidy have not. Even the most dilapidated and battered old hut becomes an agreeable nest when the humble master of it is "steady" and the mistress diligent and careful; and many an artist on his summer ramble will acknowledge that it is not always for considerations of the picturesque alone that he has passed hastily by the "substantial brick-built and slated tenement," to linger about some broken-down antiquity of turf and thatch, whose spotless whitewash and sweet honeysuckle, like the pretty housewife and her white-haired brood, have lighted up the landscape with a smile in which poverty had no place. We do not of course attach to the rhymes of honest TOM ELLIOT the howkie any intention of denouncing the rich merely because of their fine houses; on the contrary, if we were to invite him to say whether his lines would not bear inversion with equal fidelity to truth, we doubt not he would be willing, with his worthy compatriots, to say—

"What know we of the troubles—in a wee bit cot like ours—

That many must put up with in their princely halls and towers?"

For the rich man is not always happy, nor the poor man always miserable; the great house is not always blessed, nor the small house always cursed; the dweller affects the dwelling more than the dwelling does the dweller, and the warm and happy homes of England belong to all sorts and conditions of men.

London Art Galleries.

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The autumn season in London art exhibitions is now seriously beginning, and shows already good prospects. I have mentioned the work which is due to be shown at the Leicester Galleries in my last notes; besides, this October will see the sculpture of La Fontana at Messrs. Bromhead and Cutts Gallery, the Portraits and Southern Landscapes by Miss Mary Peachey at the Gieves Art Gallery, from October 3rd to 13th, and the autumn exhibition of the Grosvenor Galleries, including work by Sir Charles J. Holmes, E. Granger-Taylor, and R. G. D. Alexander.

A few notes on the artists who will be here exhibiting may be of interest to my readers. Sir C. J. Holmes will be known to them as Director of the National Gallery, where, in my judgment, his re-arrangement of the collection and its setting merits very high praise. His landscapes to be shown will, I understand, in most cases be from North Country scenery. Mrs. E. Granger-Taylor comes from Yorkshire, though she has spent part of her working life in Oxford: her pastels and water-colours possess colour and vivacity, and last year she won the £250 competition for *The Times* "Woman's Supplement." Mr. R. G. D. Alexander has found inspiration in the lanes and fields of Essex; and, lastly, Mr. A. S. Hartick, R.W.S., who is also showing in this exhibition, has gained a position by his drawings and lithographs, as well as his illustrations for the Press, and will, I understand, have here a very comprehensive collection of his drawings.

At the Cotswold Gallery in Frith Street, Soho, was opened last week, till October 21st, the second annual exhibition of water colour and other drawings by Cotswold artists. This little group of Cotswold artists, whose London centre is here in Soho Square, and who include Frederick L. Griggs, A.R.A., Mr. and Mrs. Henry A. Payne, Professor Rothenstein, Joseph Southall, and Russell Alexander, possess features in their work and aims which are worth our considering. Refinement and detail of drawing, freshness of feeling are surely among those features. I should myself be almost inclined to class them as a late off-shoot of that Pre-Raphaelite art which produced work of such delicate and emotional beauty in Victorian days; and the Preface to this exhibition seems to bear out this view in quoting Blake's dictum that "the more distinct the boundary line the more perfect the work of art"; and tracing out how, as nineteenth century art "dissolved in an evasive nebula of blots and blurs" which reflected the vagueness of contemporary thought, "certain artists united by a common impulse, forsook the life of cities, and in the Cotswold hills began once more to employ technical forms which" (the italics are my own) "*treated no single detail as insignificant.*" We find this aim carried out in the water-colour paintings here of Russell Alexander, in both "Hopegood's Barn" and "A Cotswold Farm," painted, I believe, on vellum, which have all the precision and finish of a miniature in some old fourteenth century book of service. Henry Payne's study of "The Dawn" has clean colour and good drawing, and the same may be said of his "Evening," with its low horizon, and "The Quarry"; while there is something delightfully fresh in the feeling and colour of Mrs. Payne's "Snow-white mountain lamb with a Maiden at its side," which is an idyllic version of the legend which relates that "Mary had a little lamb," but of real charm of treatment. Of course one of the strongest members of this Cotswold group is Frederick Griggs, A.R.A.; and, though I have always admired his work, I have never seen anything better of his in colour than "The Pass," which, I imagine, like so many of his etchings, and like his delightful old inn "The Pipe and Tabor" here, is a creation of his own fancy. Among other paintings which I noted were Joseph Southall's admirable pastel of "Bewdley Bridge," beneath whose arches I have often rowed, an extremely clever and pleasing drawing: though I do not like equally "The Esplanade" by this artist, which is so deficient in distance and atmosphere that the yacht in the harbour threatens to come

in front of the foreground shore. Chipping Camden, that charming little Gloucestershire town, seems to be a centre of this group, some of whose members, such as Mr. Arthur Gaskin, hail from Birmingham, which has always had a strongly Pre-Raphaelite tradition.

A very remarkable collection of Italian Renaissance bronzes has recently come into the hands of Mr. Alfred Spero, of King Street, St. James's, and is of such exceptional interest that I am taking this opportunity to bring it before my readers. All connoisseurs of Italian bronzes know the John P. Heseltine collection; and the mere fact that these pieces have appeared at various exhibitions of the Burlington Fine Arts Club, notably in the important exhibition of Italian sculpture held there in 1912, and that several of them, which appeared there, are also mentioned and even illustrated by Dr. Wilhelm Bode in his monumental work on Italian bronzes—which still remains the text-book on this subject—is a sufficient guarantee of their quality. The little display at Messrs. Spero has been an artistic treat to myself, and I only regret that my space here available only permits me to notice briefly a few of the most important pieces. First among these must come the bronze seated figure of a boy, which appeared in the Burlington Club in 1912, being called a bronze fountain figure, and which is described in Dr. Bode's work as Venetian, circa 1570. I cannot myself accept this, and agree with Mr. P. G. Konody—whom I know in Italian art matters as a critic and enthusiast—in finding Florentine qualities in this delightful "putto." There are elements, as has been suggested of Luca della Robbia, in this child form; but there are even elements which point to Donatello himself.

But the figure here which absolutely enthralled me, for its sheer mastery of technique, is the little nude helmeted female figure, up-springing in a splendid sweep of movement, which was lent to the Burlington Club by Mr. Heseltine under the name of Juno, though that of Minerva, with reason, is now suggested. There is only one name which can be placed beneath this little masterpiece, that of the famous Renaissance goldsmith and sculptor, Benvenuto Cellini; and as such Dr. Bode describes it and illustrates it in his work on Italian Bronzes. Cellini, when he made for his Duke Cosimo the figure of Perseus which still stands in the Loggia de' Lanzi, at Florence, designed also the smaller figures which stand each in their niche beneath the monument, Zeus and helmeted Pallas and Danae, mother of Perseus; and there seems every ground to think that, as Dr. Bode says, "this elegant little figure of Minerva, from the broad treatment and numerous divergencies from the statuette on the base of the Perseus, looks like a model for that statuette." To be mentioned with this is the figure of Marsyas, an early Renaissance bronze, which appears, differing in pose, in the Berlin and Florence Museum and the Pierpoint Morgan collection, and the bronze figure of a man, bearded and nude, called generally "The Executioner," which has a fine rich brown patina. The animals here, also in bronze, are very interesting, notably the large bronze rhinoceros, illustrated by Dr. Bode, and the goat, which is generally accepted as being by the hand of the famous sculptor Riccio himself.

There are some thirty-five bronzes in this collection, including some modern work by Carpeaux and Rodin: but it is the Italian bronzes which are of the first importance and which it is so far to be hoped may remain in this country, even though the temptation may be strong to take their flight, like too many masterpieces of our own art, across the Atlantic.

S. B.

Chelmsford Town Council at a special meeting recently considered important schemes. Briefly, they were:—(1) To augment the water supply by taking up to a million gallons a day from the river at Sandford Mill, involving Parliamentary powers; approximate estimate, £50,000. (2) To lay a new main trunk sewer from the King's Head Meadow to the Sewage Farm, as an unemployment relief scheme, subject to a Government grant; rough estimate, £30,000. The Council approved the principle of the first scheme, subject to a satisfactory report from a consulting engineer; and decided that preliminary steps be taken in regard to the second proposal.

Modern Methods in Building Construction.—XXXV.

By Albert Lakeman, M.S.A., M.C.I.

SUPERSTRUCTURE FRAME—(continued).

Fire-resistance is of considerable importance in modern work and a material which does not possess the characteristic of resistance to fire must either be rejected in important schemes or provision must be made for some form of protection to be applied to the structural members to make good the deficiency. This protection will mean additional cost and it is necessary to take this extra expense into account when making comparison between a material which is fire-resisting and one which requires special protection.

The fire-resistance of the structural frame is a matter which must be carefully considered, because if this is exposed to an intense fire and collapse takes place the whole building and its contents will be lost. Of the two materials under consideration steelwork has a very low fire-resistance, while reinforced concrete is comparatively high, and this lends an additional advantage to the use of the latter material for the main superstructure framework. No material can be considered *fireproof*, but it is possible to secure a measure of fire-resistance which will prevent complete failure under a serious conflagration, and in modern structures this is the condition that should be attained. Structural steel will not, of course, be consumed by the fire, but when under the action of intense heat it will buckle and become distorted, which results in serious eccentricities, and under loading the members will collapse. The application of water to the heated structure also causes sudden contraction of the steelwork, and the failure of joints, due to the shearing of bolts and rivets at the connections, makes the whole structure unstable. The collapse is all the more serious because the steel becomes twisted and distorted in a tangled mass that is difficult to remove or cut through, and rescue or salvage operations are hampered, and the clearing of debris after the fire becomes comparatively expensive. In order to endow a steel framework with the necessary resistance to fire it must be encased by some other material having a minimum thickness of two inches. The material adopted may be terra cotta in the form of special made blocks for fitting round stanchions and columns or a concrete casing can be used, this being either in the form of pre-cast blocks or as monolithic concrete. The advantage of concrete over steelwork as regards fire-resisting properties will be apparent, as the former is frequently adopted as a protection for the latter. When concrete casing is adopted for steel members it is necessary to provide some light reinforcing wires or some means of attachment, and the concrete employed should be well made with a good fire-resisting aggregate, and the material must be well tamped into the forms during deposit to produce a dense concrete having a good clean surface.

Reinforced concrete is an excellent material to resist fire, and is thus very suitable for the structural framework of a building, provided the work is executed in a first-class manner. When subjected to a fierce fire and the sudden application of cold water while the material is heated, some of the surfaces will be liable to spall off and cracks may occur in places, but the total destruction or the collapse of the structure is unlikely to result. A building may be covered by insurance, but the loss by fire will mean more than the actual value of the structure, because the inconvenience and disorganisation, destruction of records, and possible loss of life, are considerations that cannot adequately be covered by an insurance policy. The amount of the premium to be paid for insurance will also be affected by the type of structure which is covered, and the minimum risk with reinforced concrete means that the lowest rate only will be demanded.

The last item on the list of comparisons to be dealt with is that of appearance, and, generally speaking, there will not be any doubt as to the superiority of concrete, because this material provides a finished surface, and steelwork must be covered before it can be considered presentable, and, in

fact, it must be entirely disguised externally. The appearance of steelwork in the interior of an industrial building is not objectionable if it is painted, but even under these circumstances concrete will provide a more finished appearance and will save expense in maintenance. Probably one of the best illustrations to indicate the superiority of the appearance of concrete will be that of a large bridge. A steel bridge is seldom satisfactory from an artistic point of view unless it is clothed or disguised by masonry, while some excellent bridges have been executed in reinforced concrete when the structural members are not disguised in any way but left from the forms to give a true appearance that is satisfactory to the eye. It will be admitted that a material which gives a satisfactory appearance without the application of any additional covering is preferable to one which is disguised by a treatment to produce a sham, and this is the difference between concrete and structural steel when used for the main framework of a building. It does not necessarily follow that all concrete structures are satisfactory in appearance, because there have been many cases in the past where this material has been employed without any regard to proportion or architectural treatment in its simplest form, and even to-day the material is considered by many merely as a constructional item which should be hidden wherever possible by brickwork, plaster, or some other covering. Concrete is, however, capable of being employed to give a pleasing effect if it is treated in the right spirit and every advantage is taken of the possibilities which the material presents, but this cannot be considered the case with structural steelwork, which presents no possibilities whatever from the architectural standpoint.

According to the foregoing comparison it will be seen that the advantage in practically every instance is with the use of reinforced concrete for the framework. It may be considered by some readers that the author is an advocate of reinforced concrete and is biased in favour of the use of this material, but such is not the case, and the comparison is quite impartial and based simply on actual experience with the two materials in many large schemes.

METHODS OF ERECTION.—The methods of erection in reinforced concrete have been dealt with in the previous notes on concreting and forms, as the descriptions of plant, appliances and organisation generally are applicable to all types of concrete work, whether in foundations or the superstructure. The only item not specifically mentioned was the reinforcement, and this can be briefly dealt with. The preparation and placing of the reinforcement in the superstructure frame needs to be carefully and accurately executed, as any error in this respect will be liable to cause a serious weakness in the finished building as compared with the calculated requirements, and the drawings must be faithfully followed. Bar benders can be obtained for the shaping of small diameter rods in an expeditious manner, and all rods should be bent cold. Large diameter rods are frequently bent with a "jim-crow" to the required shape, which is first set out full size on a large wooden bending platform placed on the ground in a convenient position. In placing the rods care must be taken to ensure accurate spacing and a method must be adopted which will prevent displacement during the deposit and tamping of the concrete. In the case of floor reinforcement, when many small diameter rods occur, the use of notched boards, with the notches spaced to suit the pitch of the rods, will be very useful, both for expediting the spacing and also for holding the rods in position. These boards are placed at the ends of the spans or at convenient intervals, and they are withdrawn immediately the concrete has been deposited. When the rods are alternately cranked and straight the boards are notched on the two edges to suit, and the cranked rods are prevented from turning over by the bearing on the top notch. The spacing of these floor rods is frequently arranged by measuring off the centres on the shuttering and marking the positions by a short chalk line, but this is

not so satisfactory owing to the liability of the marks being obliterated and the difficulty of easy checking for accuracy.

In important work the crossings of rods are tied with a suitable tie wire, and this method is a good one as it materially assists in preventing displacement.

In the case of beam and column reinforcement, this is frequently assembled outside the form and placed as a complete lattice or cage in position, and when this method can be adopted it will prove both cheap and quick because the working space inside the form will be very limited and the accurate placing of several rods, stirrups and links will be difficult. Distance blocks between the steel and the form can be made by pre-casting small fine concrete strips of the requisite thickness and several feet long which are broken up into short lengths of about 2 inches before use. These concrete blocks can be cast into the work and will not necessitate withdrawal when the main concrete is being deposited. Wood blocks or packing must not be used for this purpose under any circumstances. Distance pieces between large diameter rods to ensure accurate spacing can be provided by the use of shaped metal plates or forks, and these also are allowed to remain in the finished work as they will be entirely surrounded by the concrete and do not weaken the member. The rods generally should be reasonably straight, and if received on the site in a bent condition owing to handling during transportation from the mills, they should be straightened out before commencing preparation and placing.

STEEL ERECTION.—The methods of erecting structural steelwork, while fairly simple and to some extent limited, provide scope for the use of appliances which will save both labour and time, and in any large scheme it is absolutely essential to employ suitable equipment if the work is to be speedily and economically executed. A very general practice in the past, which is still frequently adopted, is that of erecting a steam crane at a high level, commonly called a "Scotchman," which can control a fairly large area and hoist steel members directly up to the level required. This method is an excellent one when the structure is several storeys high and the area of the work is not too extensive, more especially as a crane, or cranes, of this type will be extremely useful for hoisting bricks, stone, or other materials when the steelwork is erected. When the work is being carried out in a large city an elevated crane has the additional advantage of being able to unload heavy materials directly from lorries or carts in the public

thoroughfare and hoist them directly on to a convenient place on the site with the minimum delay and trouble, and this is of great importance under such circumstances. A site that covers an area too large to be served by one crane of this type can be dealt with by the installation of two or more cranes, which are arranged with the jibs to reach out sufficiently far to cover the whole ground, when a load can be handled by one crane and deposited in a position which enables the adjoining one to pick it up for transfer to a point which is outside the range of the first crane.

This method is undoubtedly the best one that can be adopted for multi-storey buildings covering comparatively small areas and within the busy portion of a town or city, but it has a few disadvantages which must not be overlooked. The first disadvantage is the lack of mobility and the correspondingly limited scope of the equipment. The second is the initial outlay and the time involved in the erection of the towers, together with the loading required before the crane can be put into operation, and thirdly the towers must pass through the structure itself, and this prevents the completion of the work at these points, even on the lower floors, until the crane can be put out of commission and the towers be dismantled.

Some disadvantages must, of course, be expected when limiting conditions are unavoidably imposed on the work, and as the facility of handling the materials within the range of the crane will more than offset the disadvantages above mentioned, the method must be considered a suitable one for use in modern work.

A scheme covering a large area, where steelwork of various forms has to be erected in single storey or fairly low multi-storey structures, demands a more mobile type of equipment, and travelling derricks or locomotive cranes must be employed in order to cover the work expeditiously.

An example of a travelling derrick is shown in fig. 172, where a building three storeys high and 120 feet wide is being constructed with a steel frame. This derrick has a 60 feet jib and the whole of the stays, mast, jib and travellers are of timber and were built by the contractor on the site for the purpose of allowing the whole structure, which is over 400 feet long, to be erected without any stoppage by this one hoisting medium. As will be seen in the illustration, the 60 feet jib was not quite sufficient for the topmost roof members and a short extension was fitted which was employed when this portion of the work was being dealt with.

The steel members were brought right up to the derrick on a flat-bottom truck on a standard gauge track and the derrick gradually moved backward as the structure progressed. The illustration in fig. 173 shows the same structure nine days after the view in fig. 172 was taken. Very few men were employed on that work, but the progress made was satisfactory and the cost was exceedingly low. An illustration of part of the interior is given in fig. 174, this showing the top floor, and it will be noticed that the steelwork was of a fairly heavy character.

An interesting example of American steelwork erection is shown in figs. 175 and 176, where the method employed was that known as the "floating jib." This was a steel-framed structure 150 feet high erected to carry a 200,000 gallon water tank, and some idea of the scale can be gathered

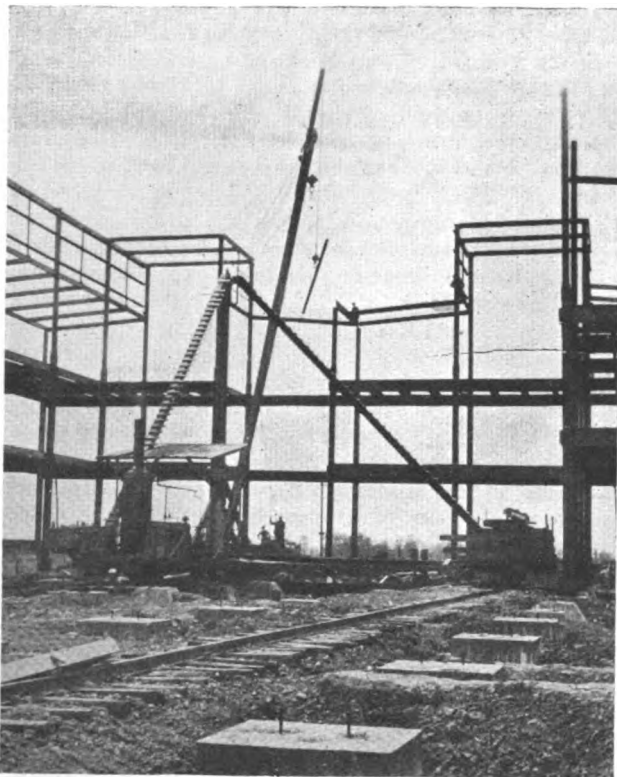


Fig. 172. TRAVELLING DERRICK ERECTING STEELWORK.

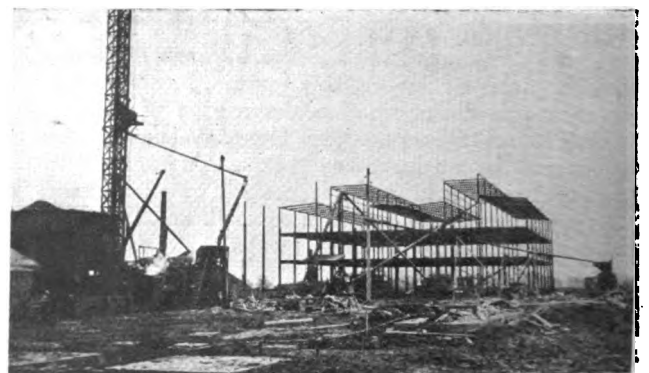


Fig. 173. GENERAL VIEW OF STEEL ERECTION.



Fig. 174. INTERIOR VIEW, SHOWING STEELWORK.

by the size of the figures of the workmen in fig. 175. The floating jib is a long stick, usually trussed with steel wires to take the tension, and this is attached to the structure upon which it is engaged without any independent support from the ground level. A steam-operated hoisting drum at the ground level is used for pulling up the load and the hoisting cable is passed through the pulley at the top of the jib. As each tier of steelwork is erected the jib is raised by gradually transferring the top guy ropes to the new level and hoisting up the base of the jib to raise it a distance equal to the height of the tier. This work is of a special nature and is dangerous, and is therefore only employed for work where speed is necessary and other appliances would be tedious and expensive. The two stages of the work shown are of interest because they represent the result of a special effort to get the tank erected in a certain definite time. When the structure had reached the condition shown in fig. 175, the American in charge of the erection made a rather boastful statement about the speed of the work and the author, who was the architect for the scheme, asked for a promise of a definite date of completion. The contractor's superintendent stated that the steel would be up, the tank erected and riveted, with the covering on ready to take water, within 14 days. The

author's response was instantly a bet of ten dollars that this would not be accomplished, and rather than retract his statement the American accepted the bet. The exact condition of the work 14 days later is shown in fig. 176, and the American paid the ten dollars. At the same time the work executed in this short time was a remarkable achievement, as the structure is 150 feet high and the tank was composed of plates which had to be riveted up with a very large number of rivets at this high level and the portion of the tank shown was quite complete. In addition to this the work was executed in the month of December, during very cold weather, and at times while snow was falling.

(To be continued.)

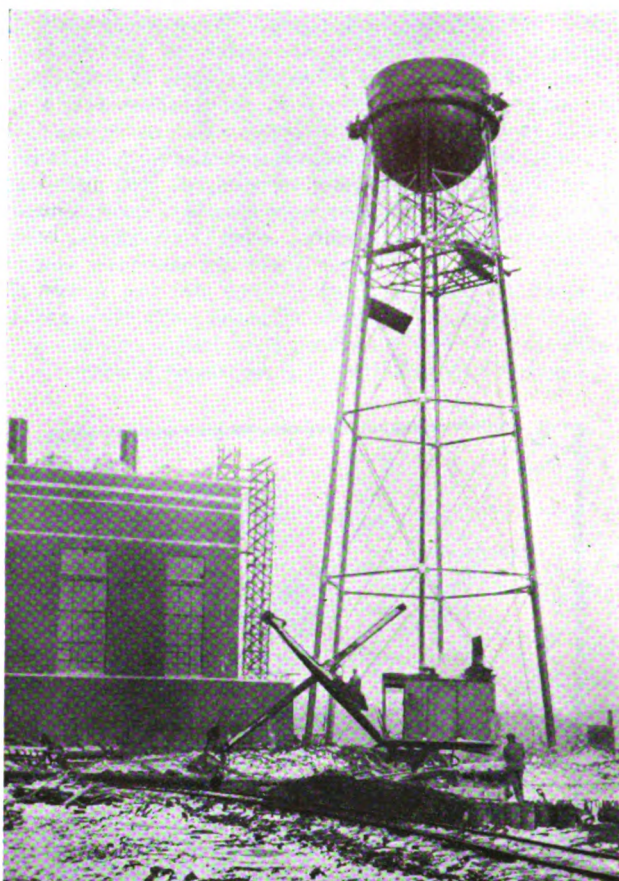


Fig. 176. STEEL STRUCTURE FOR CARRYING TANK.

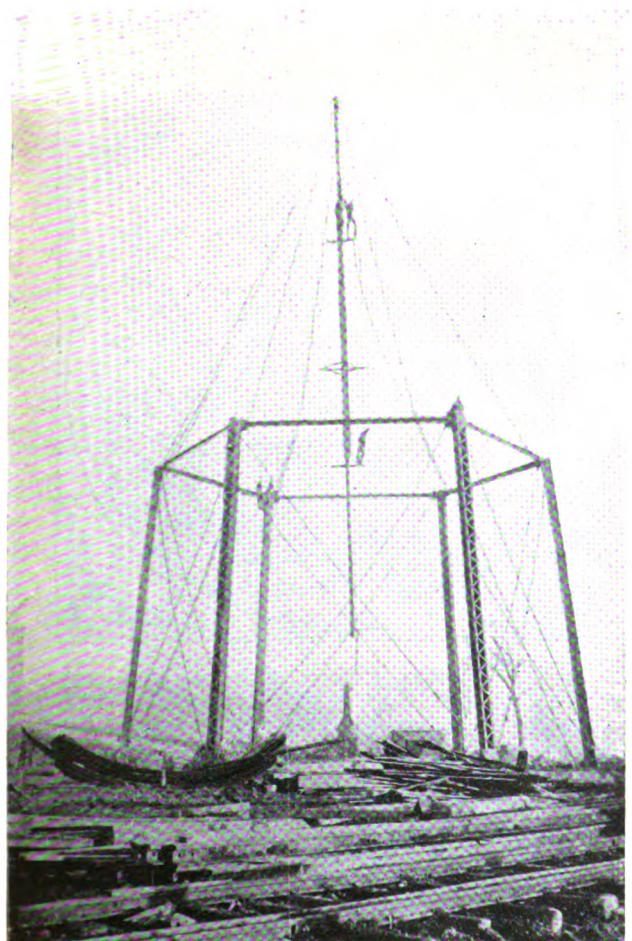


Fig. 175. FLOATING JIB FOR ERECTING STEELWORK.

PART I.—I. Introduction, Steam shovels, Jan. 13; II. Steam shovels, Trench diggers, Jan. 20; III. Grab buckets, scrapers, Jan. 27; IV. Drag-line excavators, Feb. 3; V. Derricks and cranes, radial loader, paving-breakers, Feb. 17; VI. Surplus Soil Transport (Hand Labour), Feb. 24; VII. Surplus Soil Transport (Horse-drawn wagons, Steam-driven wagons), Mar. 3; VIII. Surplus Soil Transport (Steam-driven wagons), Mar. 10; IX. Surplus Soil Transport (Steam-driven wagons, Petrol wagons, Narrow-gauge track with wagons), Mar. 17; X. Surplus Soil Transport (Narrow-gauge track with wagons, Trucks on Standard-gauge track, Electrically-driven trucks and vehicles), Mar. 24.

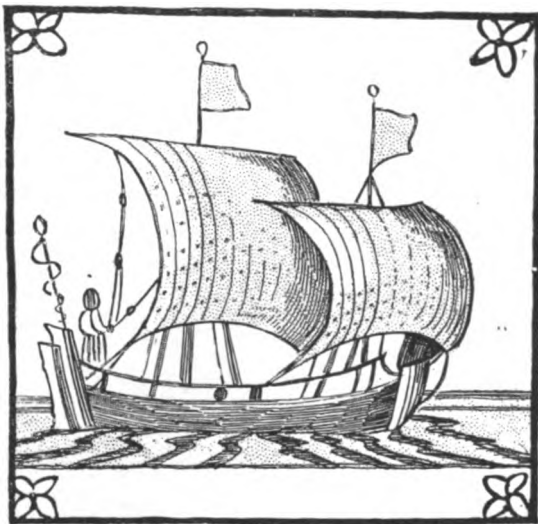
PART II.—XI. Foundation Work (Ordinary soils, Soft soils), April 7; XII. Foundation Work (Soft soils), April 17; XIII. Foundation Work (Soft soils), April 21; XIV. Foundation Work (Soft soils), April 28; XV. Foundation Work (Soft soils), sheet piling, May 5; XVI. Foundation Work (Soft soils), steel-sheet piling, May 12; XVII. Foundation Work (soft soils), steel-sheet piling, pumping, May 19; XVIII. Foundation Work (Soft soils), pumping, May 26; XIX. Foundation Work (soft soils), foundation piles, June 2; XX. Foundation Work (soft soils), foundation piles (cont.), June 9; XXI. Foundation Work (soft soils), foundation piles (cont.), June 16; XXII. Foundation Work (soft soils), Waterproofing, June 23; XXIII. Foundation Work (Soft soils), Waterproofing (cont.), June 30; XXIV. Waterproofing (cont.), July 7; XXV. Water Supply, July 14; XXVI. Concreting, July 28; XXVII. Concreting (cont.), August 4; XXVIII. Concreting (cont.), August 11; XXIX. Concreting (cont.), Aug. 18; XXX. Concreting (cont.), Aug. 25; XXXI. Form Work, Sept. 1; XXXII. Form Work (cont.) Sept. 8; XXXIII. Brickwork, Sept. 22; XXXIV. Superstructure Frame, Sept. 29.

Dutch Tiles : Their History and Present Appreciation.

By Charles G. Harper.

Few can travel in Holland without noticing, and acquiring an affection for, the characteristic blue-and-white decorative tiles with which it was once the fashion to embellish the interior of the home. But it has now become easier to admire than to purchase ; for of late years there has sprung up an appreciation for them in the country of their origin, after many years of complete indifference.

Dutch tiles, of the original three or four coloured kind, date from about 1600. The idea of this kind of wall decoration seems to have come rather belatedly, and rather curiously, too, from Spain. When we consider the sufferings of the Dutch at the hands of the Spaniards in the thirty years or so before that date, it is surprising that anything of Spanish origin should have found any sort of favour in the Netherlands. But so it was ; the idea came from the gorgeous coloured tiles in the Alhambra at Seville. This first series of tiles, of rich blues and yellows, with red and green more sparingly used, is clearly of Spanish-Moresque ancestry ; even if of inferior craftsmanship. The designs on them are generally conventionalised flowers and fruits. They are the rarest and the most expensive to collect. But the really characteristic Dutch tile, of blue on white, is of half a century or so later, and the manufacture of them, on an immense scale,



at Delft and elsewhere, continued until about 1800. The history of the industry is obscure, and only now are Dutch antiquaries seeking to recover it.

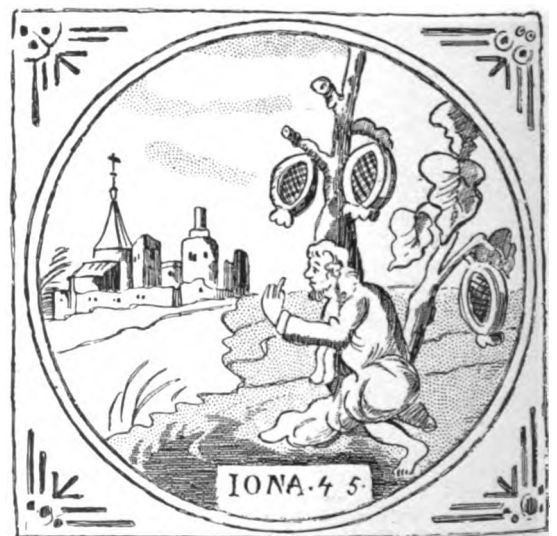
While both kinds of tile are of one standard size, five inches square, the older sorts are $\frac{1}{2}$ in. thick, the others $\frac{1}{4}$ in. Technically, from any clayworker's point of view, the blue and white thin tiles are very poor stuff, for the paste of which they are made is mixed with a good deal of coarse grit, rendering them, under their white glaze, extremely brittle. While there are numerous instances of tiles requiring several to build up a complete picture, the usual run of them shows each to be a picture in itself. For they are mostly pictorial, and, unlike the coloured tile, rarely conventionally decorative. Shipping scenes, idyllic shepherds, windmills, farmhouses, placid Dutch pastures, form the chief motives. Often the walls of a room would be completely covered with tiles. Such a decoration appealed very strongly to all the cleanly instincts of the Dutch housewife, for the passing of a damp cloth over the surface would at once restore it to freshness. But such a complete scheme of decoration gives too cold a look, like the interior of a dairy.

Scriptural subjects were favourite themes among the old Dutch tile painters. They are perhaps the most interesting and amusing of all ; amusing because of that extraordinary naïveté which was part of the artistic

equipment of those times : an utter disregard of the archæological requirements of historical painting or illustration. In common with many among the great masters, the practitioners of this little art of tile-painting represented Biblical scenes very much in the same terms as they would have displayed contemporary life. Here, for example, we have the prophet Jonah seated under the gourd-tree, waiting to see what will happen to Nineveh



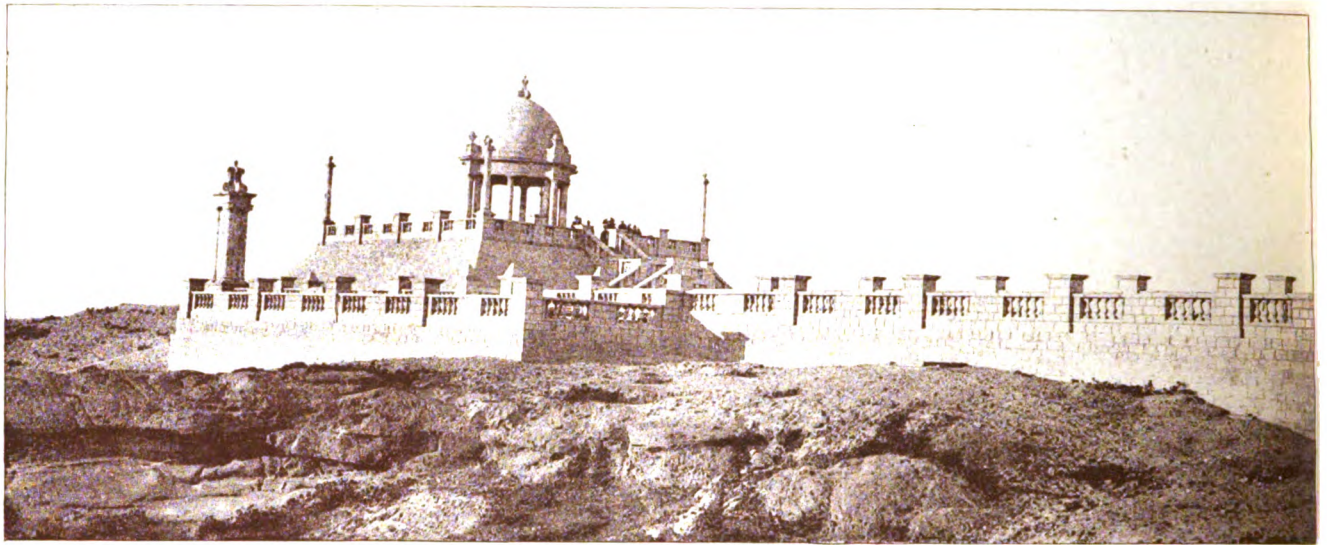
and hoping for the worst. We know it is Jonah, because of the gourd-tree ; and if we don't recognise that species we are assured of the identification because the painter has, very wisely, placed the inscription, "Iona, 4. 5" beneath. It was well he did so, for the city in the background is Dutch rather than Oriental in character. The verse reads : "So Jonah went out of the city, and sat on the east side of the city, and there made him a booth, and sat under it in the shadow, till he might see what would



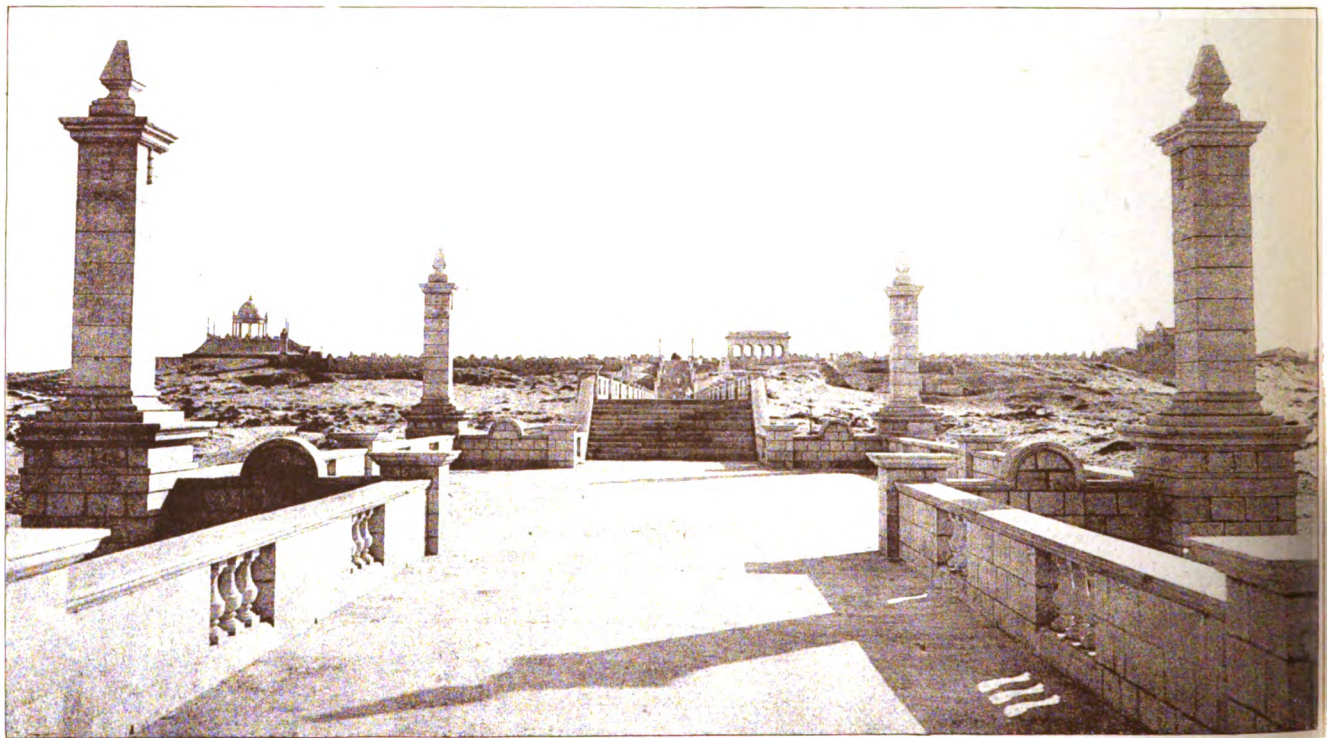
become of the city." The gourd-tree is referred to in the next verse. It will be observed that the artist has forgotten the booth.

Although these quaintly pictured tiles have a distinct charm, it would be going too far to say that the men who painted them were artists. They were journeymen, who turned them out by the thousand. It is at once their antiquity and a certain childlike quality of drawing that we really admire.

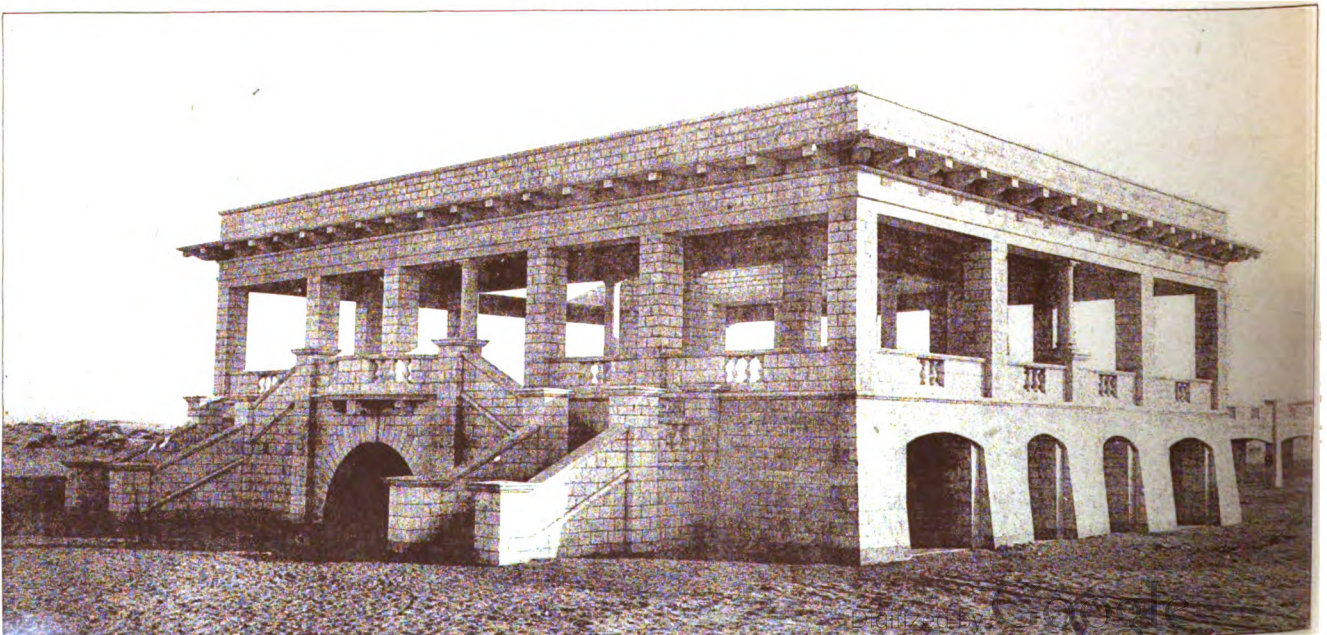
Great numbers of these tiles have been destroyed or dispersed in the pulling down of old houses, not only in



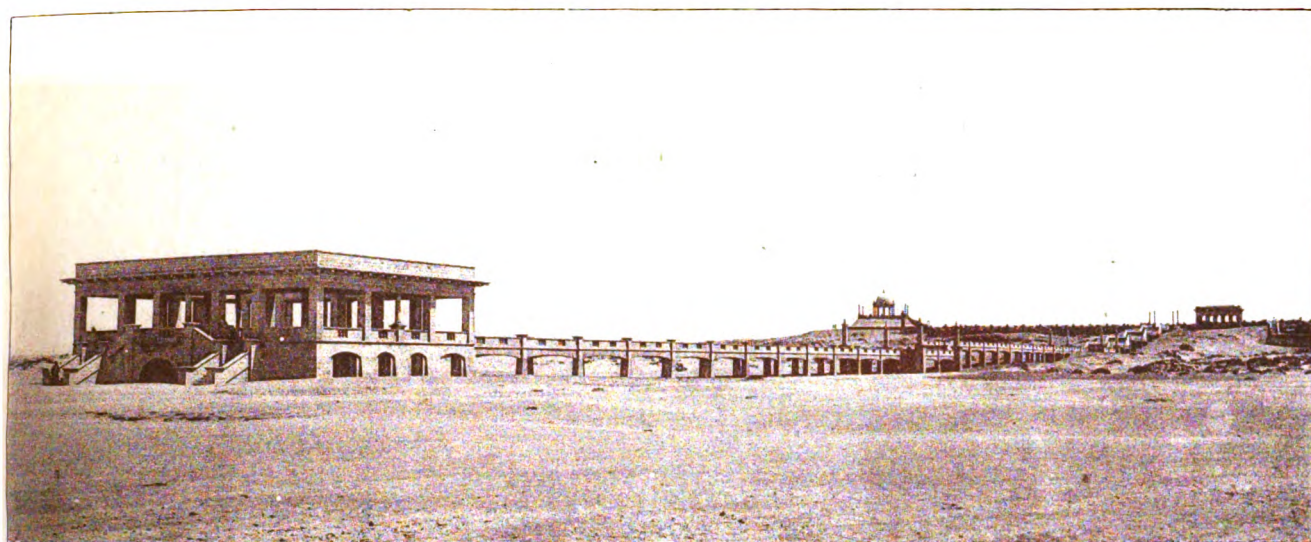
JEHANGIR KOTHARI PARADE.



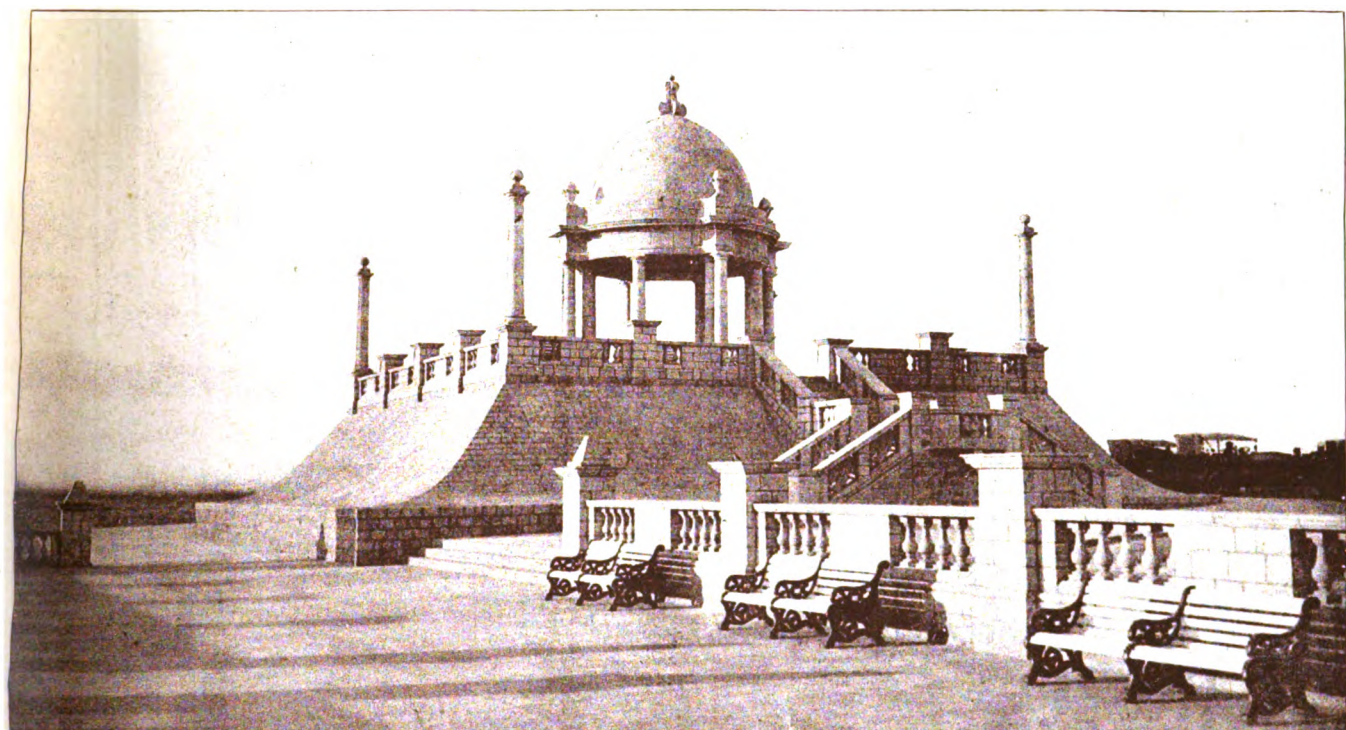
LADY LLOYD'S PIER.



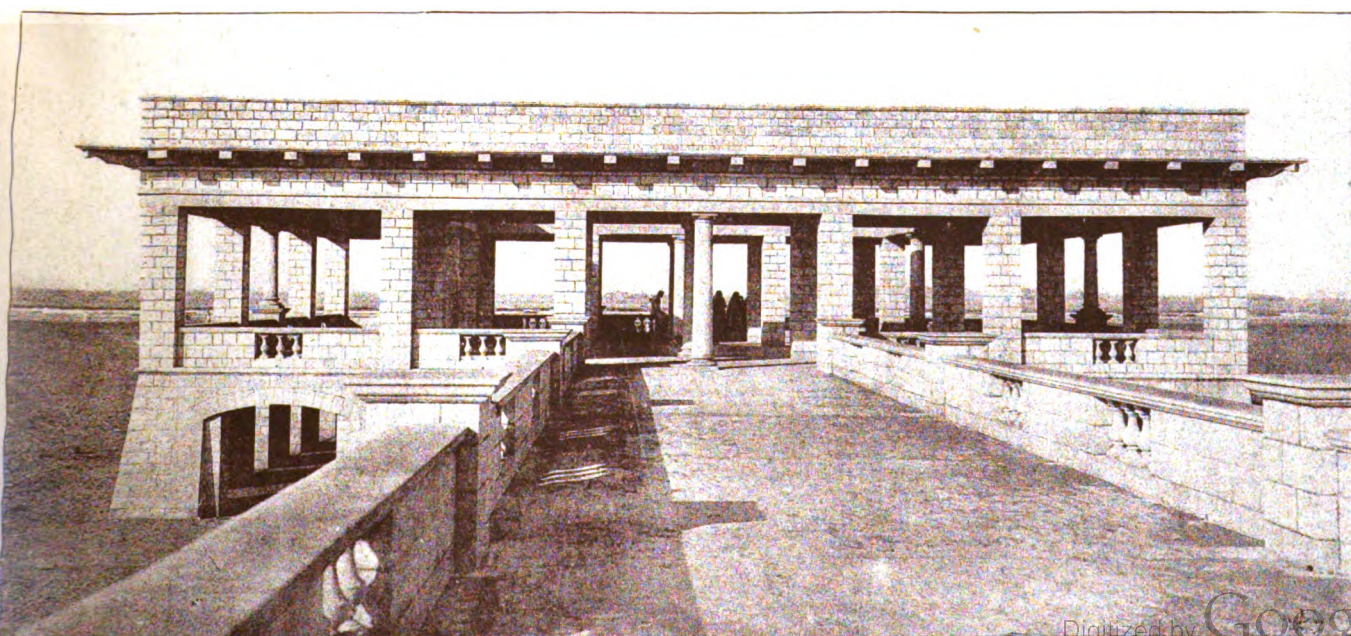
LADY LLOYD'S PAVILION.



GENERAL VIEW OF PARADE, PIER AND PAVILION.

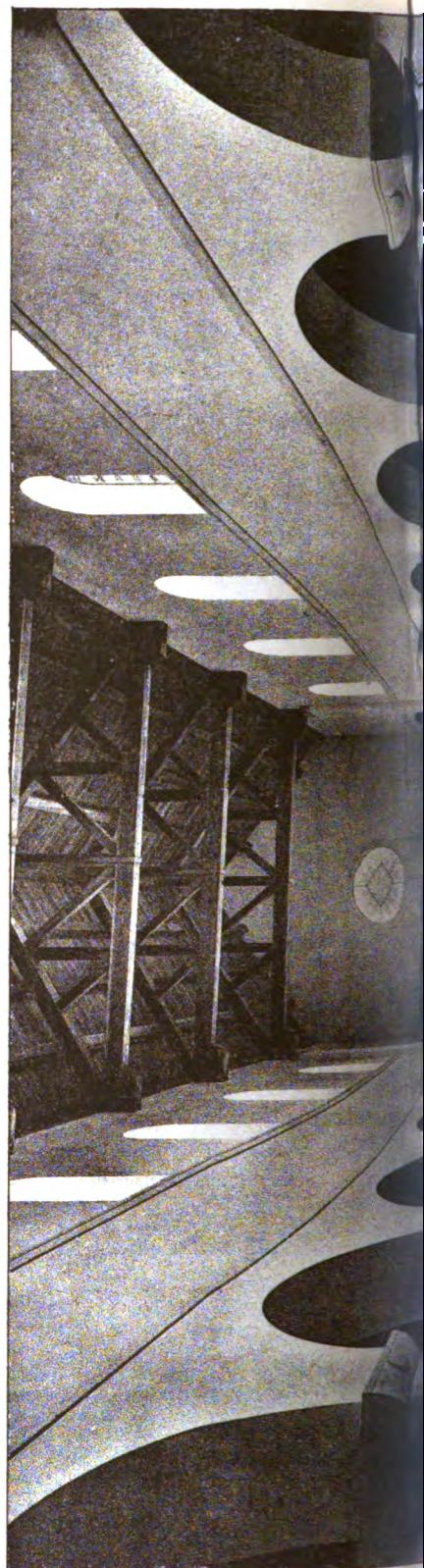
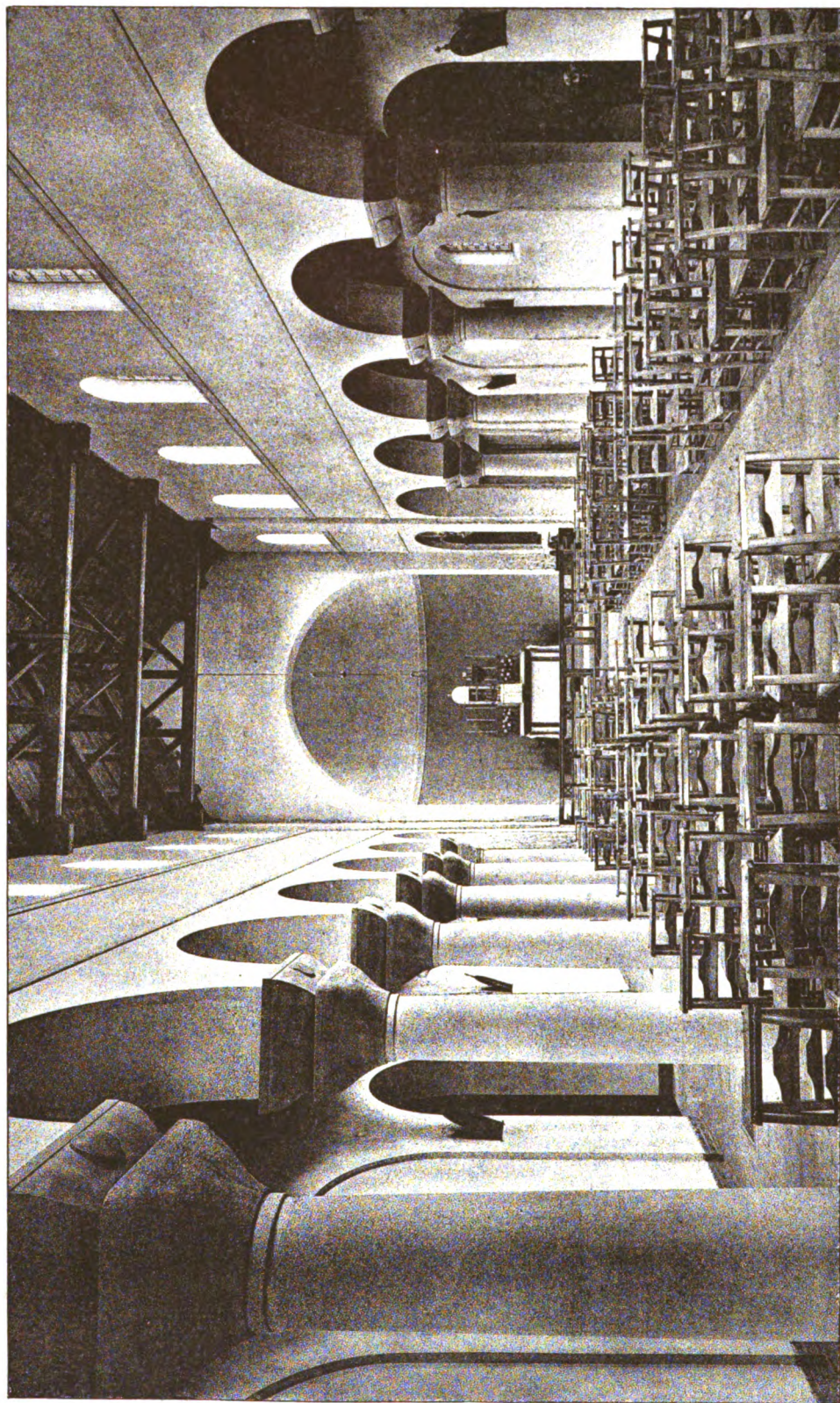


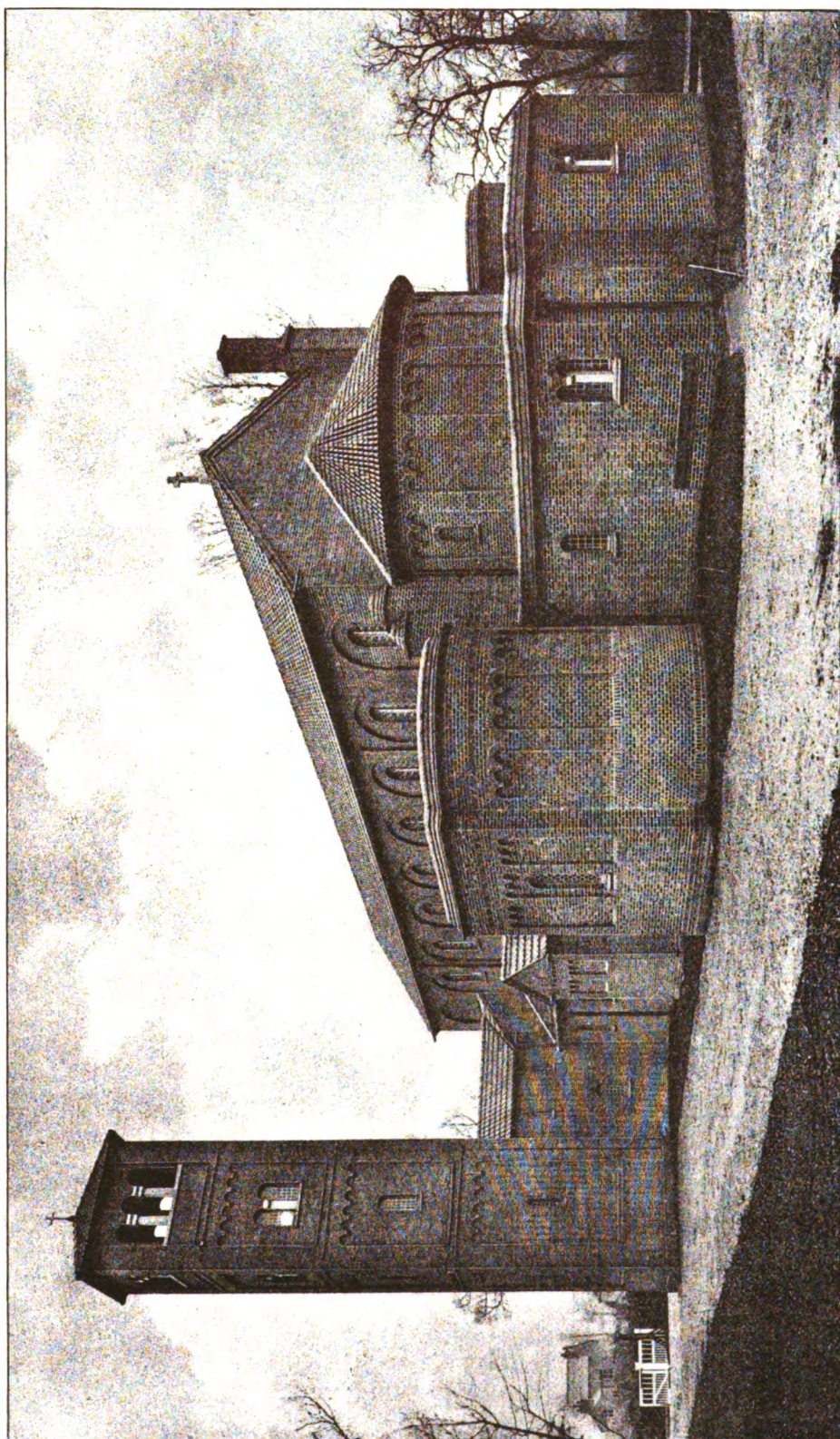
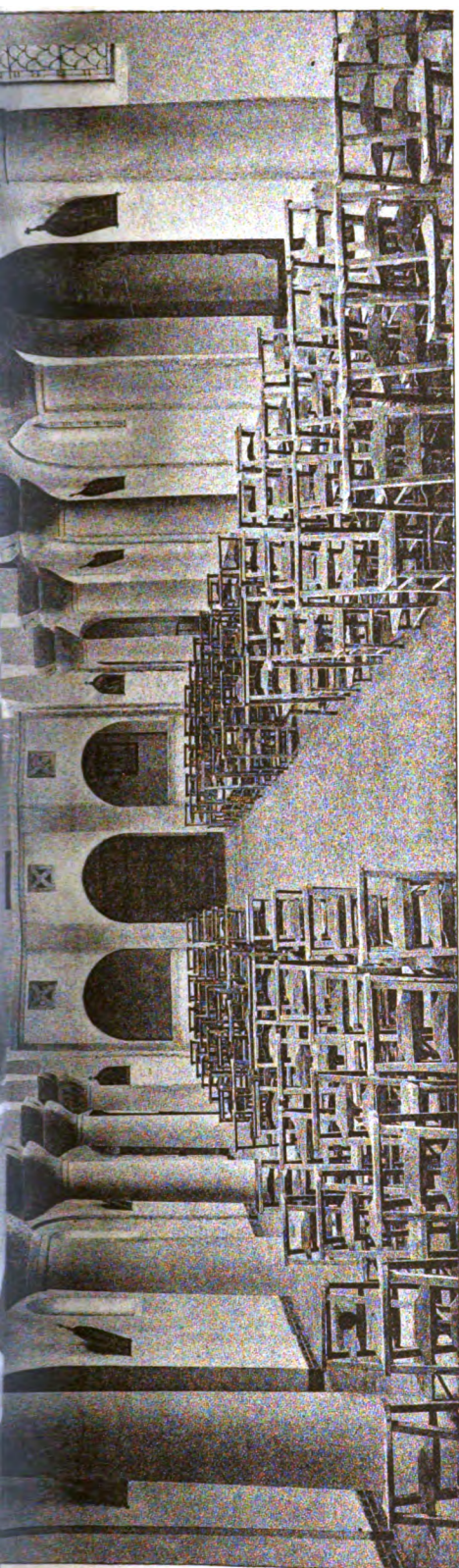
JEHANGIR KOTHARI PARADE.



LADY LLOYD'S PAVILION.

THE ARCHITECT, OCTOBER 6th, 1922.





"INK PHOTO" SPRAGUE HAYCOCK (PRINTERS) LTD 69 & 70, DEAN STREET, LONDON, W.1.

CHURCH OF THE SACRED HEART AND ST. CATHARINE, DROITWICH.

PEACOCK & BEWLEY, ARCHITECTS.

Holland. I well recollect the old Dutch merchant's house, No. 21, Austin Friars, in the City of London, built about 1670, and demolished in February, 1888. Several of its rooms were lined with such tiles. There are numerous collectors now in Holland, including the town authorities. I was shown at the Stadhuis, Monnickendam, stacks of them, some four thousand in all.

Even in Holland the completely tiled interior is becoming exceptional; so much so, indeed, that it is a matter for exhibit in museums. Such interiors are seen at their best in the Friesch Museum at Leeuwarden, where are preserved



rooms showing the arrangement of old Dutch houses. These are more particularly concerned, as regards the furnishings, with old fashions at Hindeloopen, but the blue and white tiled walls were common to every province of the Netherlands. An illustration of just such a room appeared in our issue of last week on page 226. It discloses also the old sleeping arrangements; for the wooden presses on the left are cupboards, containing beds, and the steps are bed-steps. It seems to modern ideas extraordinarily stuffy; but we are to recollect, in excuse of the practice, that Holland is a cold country.

Competition News.

The conditions of the Old Cranleigh Society Cricket Pavilion Competition are not in accordance with the regulations of the R.I.B.A. Negotiations with the promoters are proceeding.

R.I.B.A. Special War Examination.

The Board of Architectural Education state that the Special War Examination will be held for the last time from December 11 to 15, 1922.

Testimonies of study, forms of application, etc., should be submitted by November 4 next.

Examination centres will be announced in due course.

Relegated candidates will be required to take the ordinary examinations of the Royal Institute if they desire to qualify for the Associateship.

New Books.

"Quantities and Quantity Taking." By W. F. Davis. (London: Sir Isaac Pitman & Sons, Ltd. Fifth edition. 6s.)

There is one radical objection to all textbooks dealing with the preparation of quantities, and that is that in practice builders pass over, without separately pricing, very many of the small items which textbook writers deem it desirable to set out in detail.

Why, therefore, should quantity surveyors be put to the trouble of all this meticulousness, if it is to have no useful result? And, further, the effect of so much detailing may well be—or, rather, it *would* be—to enhance the estimate beyond what would be really justifiable, as in pricing every trivial item builders would almost of necessity put integers very often where merely fractions should apply.

For the book itself praise is due for a workmanlike treatment of a very interesting subject. But here and there one notices details that might be properly amended. On page 17, instead of "under 12 inches thick" for surface concrete, etc., it should read, "not more than 12 inches thick." On page 35 "grit" should read "girth"; and on page 60, line 2, "room"

should read "moulding." And one often-repeated absurdity is the phrase, "per square superficial": what else can a square be?

The diagrams are few, but to the point.

"Etruscan Tomb Paintings: Their Subjects and Significance." By Frederik Poulsen, Keeper of the Classical Department of the Ny Carlsberg Glyptotek, Copenhagen, Fellow of the Royal Danish Society. Translated by Ingeborg Andersen, M.A. Oxford, at the Clarendon Press. 1922.

The present work, published in Danish by Mr. Frederik Poulsen, in 1919, and now translated into English by Mr. Andersen, is a careful and critical examination of Etruscan tomb paintings, more especially those in the Tomba Campana at Veii, and those most interesting and important tomb paintings at Corneto, which last—as readers of "The Architect" may remember—were the subject of two special notices from me in connection with Fritz Weege's work on "Etruskische Malerei," published at Halle in 1921. Mr. Poulsen's work appeared, therefore, earlier in date to that of Mr. Weege, although this latter archaeologist had been already writing on the subject, and had published notices of the Tomba delle Bighe and the Tomba dei Leopardi as early as 1916; and the Danish writer does justice to the importance of these studies, even while he criticises the large work on "Etruskische Malerei," and finds there "Weege's statements and opinions too often more fanciful than convincing, in spite of the vast erudition displayed."

Fritz Weege does, however, succeed in inspiring the dry bones of archaeological research with wonderful suggestiveness and colour: this is because he approaches his subject with enthusiasm, supported by great study, and the present work, intended as a guide to students in the Danish Ny Carlsberg Glyptotek, does not possess the same inspiring qualities. One is even tempted sometimes to suspect that the author is not strongly in sympathy with his chosen theme. Is it fair, for example, even by implication, to describe this great and cultured nation, who at one time held the best part of Italy under their power, as "a barbarian tribe"? "Evidently," says our author, "the Etruscans drank heavily to celebrate the memory of their dead, as Xenophon relates of another barbarian tribe." Yet again, after quoting some very poor doggerel verses as accompanying the song of the Sali, he is impelled to add: "We venture to think that Etruscan poetry was no better than this"; and his contention is at least open to question that the gladiatorial combats, that greatest stain upon Roman civilisation, owed their origin to the Etruscans.

On the other hand, he does justice to the high qualities of design in such figures as the "bella ballerina" of the Tomba Giustiniani, and that most beautiful female figure, fully on a level with the creations of Hellenic art, in the couch picture of the Tomba dell' Orco; and he seems to me to prove his contention, against Weege, that it was not "hetairai," but their wives, who reclined beside the Etruscans in their banquets carried into this underworld of the tombs. What neither of these learned authors seems to me to sufficiently clear up is the question of the interpenetration which certainly existed (the contents of the Perugian Museum alone would show this) of the art and poetry of Hellas into this primitive Etruscan art creation. Very interesting is the author's note on the dominance of the Etruscans within Rome herself, where the Tarquin dynasty was probably Etruscan, and whence (as Varro tells us) came the names of the three oldest Roman tribes, the Ramnes, Tities and Luceres. The Gallic invasion of Italy struck a blow at Etruscan power, but far heavier was the loss of the great city of Veii, captured by the Romans in 396 B.C. The great dominant race fell into poverty and decay: they were Romanized by the military colonies of the Dictator Sulla, of Caesar, and, later, of Augustus; and the poet Propertius had seen, not without pity, in the Perugian war of 40 B.C., the extermination of the last Etruscan strongholds in that central Italy which had been the home and cradle of their race, and where now the Roman poet beheld: "*eversos focos antiquae gentis Etruscae*."

S. B.

Do church towers contain too many bells? This point was raised at the Bath and Wells Diocesan Board of Finance meeting. "One of the causes, I may almost say, curses, of our churches falling into disrepair," said Prebendary Farrer, "are the bells. Our towers were never built to hold an enormous number of bells. They were built to hold four or five, and now in some parishes there is a race to see how many bells they can cram in. They do not go to an architect, but to a firm of bell-hangers, who put as many bells as they can without regard for the building. There is one church in this diocese that has ten bells already, and they want twelve. Really, there ought to be some moderation. Church towers ought not to be expected to stand a strain for which they were never built."

Relaxation of Building Bye-Laws:

The Ministry of Health announces that the powers of Local Authorities under Section 25 of the Housing, Town Planning, etc., Act, 1919, have been extended by the Expiring Laws Act, 1922, to the 31st December, 1923. The Ministry has accordingly made fresh regulations, of which a copy is given below. The conditions embodied in these regulations are identical with those prescribed by the Ministry of Health (Temporary Relaxation of Building Bye-laws) Regulations, 1920, which lapsed on July 31 last.

The Minister of Health, in pursuance of the powers conferred on him by sub-section (1) of Section 25 of the Housing, Town Planning, etc., Act, 1919, as extended by the Expiring Laws Act, 1922, and of all other powers enabling him in that behalf, hereby makes the following Regulations:

1. These Regulations may be cited as the Ministry of Health (Temporary Relaxation of Building Bye-laws) Regulations, 1922.

2. A Local Authority, notwithstanding the provisions of any building bye-laws,* may, during the period for which Section 25 of the Housing, Town Planning, etc., Act, 1919, as extended by the Expiring Laws Act, 1922,† and by any subsequent enactments may be in operation, consent to the erection and use for human habitation of any building erected or proposed to be erected, which complies with the conditions set out in the Schedule hereto.

3. The deposit to be received from a person appealing to the Minister of Health against the neglect or refusal of a Local Authority to give such consent as aforesaid, or against the conditions on which such consent is given, or against the decision of the Local Authority as to the period for which the building may be allowed to be used for human habitation, shall be the sum of ten pounds: provided that the Minister of Health may in any case, if he thinks fit, require a deposit of less than ten pounds or may dispense with a deposit.

4. The Interpretation Act, 1889‡, applies to the interpretation of these Regulations as it applies to the interpretation of an Act of Parliament.

Schedule.

CONDITIONS.

1. The whole ground or site of the building within the external walls shall, wherever the dampness of the site or the nature of the soil renders this precaution necessary, be covered with a layer of good cement concrete at least 4 inches thick finished shovel face.

2. (1) Each external wall of the building shall either,
 - (a) to a height of not less than 6 inches above the surface of the ground adjoining the wall, be constructed of good cement concrete not less than 6 inches thick, or of brickwork composed of good whole bricks or stonework, all brickwork or stonework in the wall to be properly bonded and solidly put together with good lime or cement mortar and to be not less than 4½ inches thick; or
 - (b) be carried at a height not less than 6 inches above the surface of the adjoining ground upon sufficient piers constructed of good bricks, stone, or other hard and suitable materials properly bonded and put together, or of good cement concrete, or in the case of a building erected before October 13, 1919, and not

subsequently re-erected, upon wooden piles or other supports of sufficient strength and in good condition.

- (2) Each external wall or pier of the building shall rest on concrete or on some other solid and sufficient foundation.
- (3) Every wall or pier of the building shall be provided with a proper damp-proof course of asphalt or slates laid in cement, or of some other durable material impervious to moisture, beneath the level of the lowest floor and of the lowest timbers, and at a height of not less than 6 inches above the surface of the ground adjoining the wall:

Provided that where application is made to a Local Authority for their consent to the use for human habitation of a building of a permanent nature existing at the time when the application is made and there are no signs of dampness in the walls and the soil is dry, the provision of a damp-proof course shall not be required if the following conditions are satisfied, namely:—

An impervious paving shall be provided outside the house at the ground level and adjoining all the external walls. This paving shall extend for a distance of at least 3 feet from the walls, and shall be continuous with a skirting of impervious material carried up on the exterior walls for a distance of at least 6 inches, and shall be sloped so as effectually to carry away all rain and waste water that may fall thereon from the walls of the house.

3. Every external wall of the building shall be constructed of good and suitable material and so as to be of sufficient stability and weather-proof.

4. The roof of the building shall be so constructed and supported as to be of sufficient stability and shall be covered externally with suitable fire-resisting and weather-proofing material.

Provided that it shall not be necessary to cover the roof with fire-resisting material if the following conditions are observed, namely:—

- (a) The building shall not be more of than two storeys in height and shall not comprise or form part of a block of more than 4 separate dwellings under one roof.
- (b) (1) The building shall be distant
 - (i) at least 10 feet from the boundary of its curtilage except at any point where its curtilage adjoins that of a dwelling house forming part of the same block;
 - (ii) at least 20 feet from the nearest building, other than an out-building standing in the same curtilage or a dwelling house forming part of the same block;
 - (iii) at least 30 feet from the nearest public carriage-way used or likely to be used for through traffic;
 - (iv) at least 60 feet from the nearest boundary of any railway on which steam engines are used.
- (2) Every block of 4 dwelling houses having a roof not covered with fire-resisting material shall be isolated by a distance of 60 feet from any other dwelling house having a roof not covered with fire-resisting material.
- (3) Every group of 4 dwelling houses having roofs not covered with fire-resisting material shall be isolated by a distance of at least 60 feet, every group of 24 such dwelling houses by a distance of at least 180 feet, and every group of 96 such dwelling houses by a distance of at least 540 feet from any other such dwelling house.

In this rule:—

A "group of 4 dwelling houses" means any 4 dwelling houses the buildings comprising which are so situated that there can be drawn, passing through all the buildings, a line on which the distance between one building and the next in succession is in every case less than 60 feet.

A "group of 24 dwelling houses" means any 24 dwelling houses the buildings comprising which are so situated that there can be drawn, passing through all the buildings, a line on which the distance between one building and the next in succession is in every case less than 180 feet.

A "group of 96 dwelling houses" means any 96 dwelling houses the buildings comprising which are so situated that there can be drawn, passing through all the buildings, a line on which the distance between one building and the next in succession is in every case less than 540 feet.

- (4) For the purposes of this proviso all distances shall be measured horizontally to the nearest part of the building, other than the eaves or verge of the roof.

* Section 40 of the Housing, Town Planning, etc., Act, 1919, enacts that, for the purpose of Part I. of the Act, the expressions "Building bye-laws" includes bye-laws made by any local authority under section one hundred and fifty-seven of the Public Health Act, 1875, as amended by any subsequent enactment, with respect to new buildings, including the drainage thereof and new streets, and any enactments in any local Acts dealing with the construction and drainage of new buildings and the laying-out and construction of new streets, and any bye-laws made with respect to such matters under any such local Act.

† The Expiring Laws Act, 1922, extends the operation of this Section to December 31, 1923.

‡ 52-3 V. c. 63.

(c) Every chimney of the building shall be carried up to a height of not less than 5 feet above the ridge of the roof in brickwork or other solid incombustible material, which, where the chimney passes through the material forming the roof, shall be not less than 9 inches thick and rendered externally.

5. Where the building is intended to form two or more dwellings, the dwellings shall be separated by solid partitions of incombustible material not less than 3 inches thick, carried up to the under side of the roof covering and resting throughout their entire length on solid continuous walls which as regards construction and damp-proof course shall comply with the provisions of paragraph 3 of this Schedule :

Provided that where any such partition is over an open passage between two dwellings it may rest on a sufficient arch or bressummer of fire-resisting material.

Given under the Official Seal of the Minister of Health this Sixteenth day of September, in the year One thousand nine hundred and twenty-two.

An Institution of Structural Engineers.

At a well-attended meeting of the Concrete Institute on Thursday, September 28, it was decided, by a large majority, to change the name of the Institute to "The Institution of Structural Engineers," of which there will be a section devoted to concrete constructional work. The idea of changing the name of the Concrete Institute was mooted many years ago, but just at the time the scheme was likely to be seriously considered the war broke out, and the matter was left in abeyance. Soon after the Institute was formed, it was realised that the interests involved went much further than concrete work, and the papers that have been read before it have covered a much wider field; reinforced concrete, in particular, has found an important place in the work that the Institute has done, whilst of latter years general constructional work has made vast progress. The result is that the Board of Trade has called the attention of the Council of the Concrete Institute to the fact that it was undertaking work considerably beyond the scope of its original articles of Association, and has laid it down that it must either alter the title of the Institute or revert to the more limited scope of activities originally contemplated. Hence the proposal to form an Institution of Structural Engineers.

The objections to the proposed change came from a number of gentlemen engaged principally in concrete and reinforced concrete work, who fear that the prestige of this industry will be seriously damaged by merging it in the general title of structural engineering, it being, at the same time, pointed out that the Institution of Civil Engineers, the Institution of Municipal and County Engineers, the Junior Institution of Engineers and the Society of Engineers also cover structural engineering work in various degrees. On the other hand, the feeling of the majority of the Council was in favour of the change, on the ground that concrete itself is merely one form of construction, and that it would only be following a progressive line to include within the scope of the Institute all forms of constructional work, thus bringing into the membership those concerned with iron and steel, concrete and, indeed, any other form of material used for building purposes. Those opposing expressed the view that they would be satisfied to have the name of the Institute altered so long as the word "concrete" appeared in it, and a proposition that the title should be altered to "The Concrete Institute, and Institution of Structural Engineers," was put to the meeting, but was lost, the voting being 12 for and 78 against. The Council's proposal that the name should be changed to "The Institution of Structural Engineers," was subsequently put to the meeting and carried by 110 votes to 13.

The meeting then passed a number of resolutions consequential upon the change in name, and all the resolutions will be put up for confirmation at an extraordinary general meeting to be held on October 19. Incidentally, it may be mentioned that, under the new Articles of Association, there will be an increase of subscriptions for Members and Associate Members from £2 2s. to £3 3s.

Mr. P. St. John Dawnay, only surviving son of the late Sir Archibald Davis Dawnay, died at Cardiff on the 26th ult., from pneumonia, in his forty-ninth year.

The Wandsworth Borough Council invite applications for the appointment of a borough engineer and surveyor. The salary is £1,000 per annum, plus Civil Service bonus for the time being in force with travelling allowance of £350 per annum. Conditions of the appointment and further particulars may be obtained from the Town Clerk, to whom applications must be delivered by December 1. Personal canvassing will be a disqualification.

Correspondence.

"Modern Methods in Building Construction—XXXIII."

To the Editor of THE ARCHITECT.

SIR,—Referring to the above appearing in your issue of September 22, we note that Mr. Lakeman points out that the suspended scaffolding, the advantages of which he so aptly describes, can be obtained on hire in "America." May we be allowed to state that this Suspended Scaffolding can also be hired in Great Britain from the undersigned Company, who will be pleased to give any information in connection therewith.

May we also state that this Company has in stock hundreds of these machines ready for immediate despatch to any job in any part of Great Britain, for which territory we have been appointed sole agents.—Yours, etc.,

D. PALMER-JONES, Managing Director.

43 Lansdowne Road,
Stockwell, London, S.W.8.

Central Employment Bureau.

(Incorporating the members of the R.I.B.A. and the Society of Architects.)

SIR,—The A.S.A.P.U. Employment Bureau has recently entered into an arrangement with the Royal Institute of British Architects, and the Society of Architects, whereby all vacancies notified to and all assistants registering with any of the three bodies are passed for action to our Bureau, in recognition of which the latter has now been renamed the

"CENTRAL EMPLOYMENT BUREAU."

May we ask the hospitality of your columns to bring to the notice of all practising architects, surveyors and other employers of technical assistants the extended functions of the Bureau.

The Bureau can save the employers considerable time and trouble by putting forward names of those men only who have the necessary qualifications.—Yours, etc.,

T. BILBOW,

Director, Central Employment Bureau.

Architects' and Surveyors' Assistants' Professional Union,
36, Victoria Street,
London, S.W.1.
September 28, 1922.

Architects' Fees for Abandoned Housing Work.

The Council of the R.I.B.A. have appointed Messrs. H. T. Buckland, Francis Jones, and Herbert A. Welch to form a Tribunal whose duty it will be to examine all applications received by the R.I.B.A. from housing architects under the provisions of Clause E (4) of G.H.M. 61, and to act generally on behalf of the R.I.B.A. upon this matter. It will be remembered that these three gentlemen represented the R.I.B.A. during the negotiations which resulted in the issue of G.H.M. 61, and it is regarded as fortunate that they are able again to serve the R.I.B.A. and the profession.

It has been decided to charge a nominal fee of two guineas to all architects who desire the support of the R.I.B.A. The funds thus obtained will be devoted entirely to the expenses in connection with the Tribunal. All housing architects from whom applications have been received to date have been notified of this, and those who wish for support but have not yet applied should do so without delay, as a speedy settlement of all accounts is now anticipated.

A number of interesting pieces of English furniture recently presented by Mr. Douglas Eyre have been placed on exhibition in Room 56 of the Woodwork Galleries of the Victoria and Albert Museum. These pieces of furniture date from the latter part of the seventeenth century to the middle of the eighteenth century: they have been handed down in the donor's family, and thus have an important documentary interest. They include a winged armchair of about the year 1700, embroidered in coloured wools with David playing the harp before Saul, and other biblical and mythological subjects; and a large double-back settee with three chairs and a stool of the time of James II. Among examples of the eighteenth century, the most valuable is a set of mahogany chairs, richly carved with ornament of the middle of the century and the crest of the Eyre family. This welcome gift is of great importance in strengthening the English furniture in the Museum at a time when high prices and lack of money make it difficult for a Government institution to compete with wealthy collectors.

The Ventilation of Houses and Apartments.

Having perfected means for the ventilation of places of public assembly and working rooms of factories, authorities on ventilation have turned, says Mr. G. C. Polk in "The American Architect," their attention to improving living conditions in the average dwelling, this including houses and apartments.

The necessities are pure air in proper quantities at a comfortable temperature. Experiments have shown that comfort is obtained when air coming in contact with the skin is felt to be moving. This is true even when air is vitiated and when it is at a relatively high temperature. The problem resolves itself into causing the air within rooms to move and to provide for the introduction of fresh air and the expulsion of used air at a minimum of expense. Any system that ignores dust, the bugbear of careful housewives, is bound to fail.

The window alone enters into the scheme of things only on perfect days, of which there are too few, and must be disregarded on days when the wind is in the wrong quarter or when it brings clouds of dust into the house. In summer when temperatures at times become unendurable it is often the case that the wind comes laden with dust. Closed windows only partially exclude dust and they cause suffering because of high temperature and lack of a current of air.

In winter when it becomes close and hot within and there is a high wind outside the same conditions exist as in summer. On the other hand when it is cool within the house and auxiliary heat is used, such as that furnished by a gas or electric stove, the full benefit cannot be enjoyed until there is a uniform distribution of the warmed air. The obvious thing to do is to employ a fan electrically operated. The heat from auxiliary heating appliances is usually radiant heat and should be directed towards some surface which will be heated and supply currents of rising warm air. These the fan can play upon and direct to distant parts of the room, soon establishing uniformity of temperature and a movement of air which will be felt by the skin.

Such devices are merely air stirrers and proper ventilation is not obtained until there is an entry of air at a number of places and a discharge at one place, all without the creation of draughts. Fresh air must be pulled in and vitiated air must be thrown out, this requiring the installation of a fan at one or more windows. The first window thus to be utilised is a kitchen window. Aesthetic considerations have much to do with the selection but common sense plays the greater part.

The kitchen is filled with smoke, greasy fumes and cooking odours three times each day for considerable periods of time. The air not only is contaminated but a greasy film is deposited on the walls, curtains, furniture and fixtures. If the air moves in the wrong direction the whole house becomes smelly and greasy. The greasy film is a most pervasive thing and one man who used the upper shelves of kitchen cupboards as a storage place for books until he had enough to warrant the purchase of a bookcase, found to his surprise that the grease went through very small cracks indeed. Tenants of apartments who are compelled to keep goods in closets which appear to be well closed are often disgusted, when moving time comes, at the feeling of the articles they kept there or the feeling of the covers in which the articles were wrapped.

Obviously the selection of a kitchen window for the installation of the first fan is wise. Open windows and doors make it difficult to keep the gas flame burning. The fan makes the housewife independent of the whims of the winds, and it continuously exhausts a volume of air, carrying with it all odours, smoke and grease. When the air passes out of the kitchen window it draws air through the kitchen from other rooms in the house. These in turn obtain fresh air through crevices around doors and windows or from open doors and windows. The result is a steady flow of air from every window and door, to and through, the kitchen. This not only ventilates the whole house but prevents the entrance into other rooms of smoke, odours and greasy fumes from the kitchen.

The money cost of ventilation in factories may be computed but that it pays is shown by the greater output and increased efficiency of the workers. In such a scheme the open window and door can play no part for the ventilation system is designed with a view to bringing definite quantities of air into rooms at definitely fixed points and discharging it at certain other points. The cost of ventilating dwellings becomes in a short time part of the general expense of running the home and is not felt. The apparatus operates only at the times the need is felt and for many days in the year this amounts to not more than three to five hours each day. The first cost of such a fan is not high and the cost of operation is at all times under perfect control.

A few years ago the wiring of houses was based on lighting requirements only. To-day houses are being wired for power

as well as for light because of the constant increase in number of appliances operated electrically. With the increased sale of power fans has come a recognition that something larger than the ordinary fan, which stirs air, might be appreciated and some manufacturers tentatively offered fans which could be installed in windows of kitchens, smoking rooms, bedrooms, etc. Although on the market but a comparatively short time there has arisen a considerable demand. This is so great that in many recent plans for houses and apartments, provision has been made for fans which will throw out vitiated air and which may be reversed in motion for drawing in outside air when needed. These arrangements sometimes consist in specifying that a fan be installed in certain windows while other architects have provided special openings. In one such plan bulls-eye openings have been provided with metal louvres which may be opened by chains from the inside. The fans are to be set in these bulls-eyes, and on the inside are hinge-opening doors made of coloured glass.

Such designs are expected to become usual in the future. The ventilation of houses and apartments solely by fans, to the complete exclusion of doors and windows, will never come about. The use of fans, however, in all kitchens may be looked for within a very short time, now that fan manufacturers supply them in special frames and fittings at low prices. Following use in the kitchen they will be used in other rooms, for people everywhere are now regarding as necessary everything that adds to comfort and convenience.

In plans recently completed for some medium size houses a ventilating fan was specified for each kitchen and for one room on the opposite side of the house from the kitchen. For each window there was provided an air screen, such as is sold in all large department stores. Whenever a fan is to be operated to carry out air an adjustable air screen, which is made of fine cloth in a frame, will be placed in each sash underneath the partially opened window: as many windows being thus opened as the need for fresh air demands. The screens partially solve the dust problem, which demands for a full solution stopping or screening the space between the upper edge of the lower sash and the lower edge of the upper sash, something which may readily be accomplished. The fortunate occupants of such houses may create currents of air at will in any direction without regard to the prevailing wind. One fan may be exhausting air and the other fan supplying fresh air from the outside. For the ordinary single family house two fans are a luxury, as a single fan in the kitchen will do all that is necessary. Two fans, however, will be very comfortable on hot summer nights as the current of air thus produced will be felt in every room, after one learns how to arrange door openings to direct the air at will through any room.

Conference of Engineering Societies.

A conference of engineering societies convened by the Society of Engineers was held on the 29th ult. at the Engineers' Club, London, to consider the advisability of inaugurating an Association of British Engineering Societies which should be independent of the Joint Council which is understood to be in course of formation among the four leading bodies—namely, the Institutions of Civil, Electrical, and Mechanical Engineers, and the Institution of Naval Architects. The Council of the Society of Engineers, which arranged the conference, considered that a number of local engineering societies at present working on more or less parallel lines but quite independently of each other would derive mutual advantage from being brought into close touch with one another.

The scheme of the proposed Association was explained by Mr. W. Noble Twelvetrees, past president of the Society, to representatives of various societies and institutions from different parts of the country, and he moved that there be formed forthwith an Association of British Engineering Societies in accordance with a draft constitution to be prepared thereafter. Mr. C. H. Wordingham, past president of the Institution of Electrical Engineers, seconded. Discussion ensued, and eventually an amended resolution was agreed to as follows:—"That this meeting considers the suggestion that there should be formed an Association of British Engineering Societies sufficiently important to justify the appointment of a committee to consider the question and to submit detailed proposals to the societies concerned." A committee of seven was nominated and instructed to draw up a draft constitution and receive suggestions.

The questions set at the Intermediate and Final (and Special) R.I.B.A. Examinations have just been published in pamphlet form, and may be obtained at 9 Conduit Street, W.1, price 1s. 6d. (exclusive of postage). Candidates will find the study of past questions a great help in preparing for the examinations.



—these stairs are perfectly SAFE

They are fitted with Ferodo Patent Stair Treads. After two years' wear the treads showed little signs of wear, whereas rubber treads which were formerly used would have been worn out—they were always dangerously slippery on wet days. Ferodo Stair Treads are made of closely woven cotton impregnated with a special chemical "bond" which gives the fabric the durability of metal. They do not lose their perfect "grip" even when worn to paper thickness.

FERODO

Patent STAIR TREADS

Ferodo Treads require no polish. A good scrubbing with a dry brush is all that is necessary to clean them. They deaden the clatter of footsteps on the stairs, and they remove the danger of slipping.

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Trade Notes.

Messrs. Douglas Young & Co., surveyors and auctioneers, announce that from September 29 their City address will be 69, Coleman Street, E.C.2, a few doors from their present offices, the lease of which has expired. The telephone number and telegraphic address remain unchanged.

Bell's United Asbestos Co., Ltd., have declared an interim dividend on the ordinary shares of sixpence per share, less income-tax, on account of the profits of the current year. The dividend will be paid on the 23rd inst. to shareholders on the register on 7th October, and the ordinary share transfer books will be closed from the 7th to the 20th proximo, both dates inclusive.

The Sports Club connected with Messrs. Waygood-Otis, Ltd., entertained their friends at Bellingham on Saturday, September 23, on the occasion of their thirteenth annual sports. After an interesting series of events the prize winners were announced by the starter, Mr. C. H. J. Day, the presentation being made by Mrs. C. Clarke, supported by Mrs. C. H. Day, Mrs. E. Wood, Mr. H. C. Walker, Mr. C. Clarke, Mr. R. H. Thorpe, and Mr. and Mrs. H. Harmsworth.

Messrs. E. T. Bartlett, 65, Victoria Street, S.W.1, have introduced on to the English market, under the name of "Met-Wood," a floor finish which has proved a great success in Holland. It is of a neutral composition, delivered in a liquid and powder form. When mixed in the proportion of 3 to 5 and laid to a thickness of $\frac{3}{8}$ in. it forms an homogeneous mass, having a tenacity to adhere to stone, steel, iron, or wood. "Met-Wood" is guaranteed free from magnesite, and may be walked upon forty-eight hours after application. It is manufactured in two varieties, to serve as a top floor and underfloor respectively. When an ordinary floor of grooved and tongued boards is covered with rubber or lino it too often happens that before long the covering is damaged over the seams of the wood—this can be prevented by a thickness of "Met-Wood."

We have received from Messrs. J. C. King, Ltd., of 42-60, Goswell Road, E.C.1, a sample set of their time sheets, variation sheets, contract forms, and time cost books, insurance wages books, and various other forms, which will appeal to our readers as a great help in conducting business. J. C. King's have made a study of this particular part of the building trades wants and will send samples on application. Their motto is "Method is the Very Hinge of Business." The sample set now completed will certainly facilitate that maxim. The firm have also special varieties of prime cost books, of which their range is, we think, one of the best in London. Anyone needing any of these books cannot do better than either call or send a postcard for samples.

General.

It is proposed to erect a pavilion on the Municipal Golf Links, Wallasey, at a cost of £3,380, and also a tennis courts pavilion at Harrison Park at a cost of £580.

The special Exhibition of the models and drawings of the Bank of England, which aroused so much public interest in August, will be continued during the winter season at the Soane Museum.

The Lancaster Town Council last week accepted tenders for the erection of 20 more Government houses at an inclusive cost of £10,861 3s. 8d., or £543 per house.

The Housing Committee of Stourbridge Town Council have directed the Borough Surveyor to prepare a tender for the erection of 24 additional houses on the Grange Estate by direct labour.

The panel of fourteenth-century stained glass recently brought to light at Chelsea Old Church is now on exhibition for a short time at the Victoria and Albert Museum, in Room 136 on the second floor.

The Bognor Urban District Council are engaging an expert, at a fee not exceeding 50 guineas, to advise upon the acoustic properties of the Pavilion, and as to what steps should be taken to improve the same.

Mr. G. C. Lowbridge, Lic.R.I.B.A., has been appointed architect and surveyor to the Staffordshire County Education Committee at a salary of £800 per annum. Mr. Lowbridge has acted as assistant architect to the committee for fifteen years.

Direct labour is to be employed in the construction at Charterhouse School of a chapel as a memorial to Carthusians who fell in the war. The chapel, which has been designed by Mr. Gilbert Scott, R.A., will cost £58,000, and will take two years to build.

At the last meeting of the Durham County Water Board it was stated by the Chairman that it was intended to lay a pipe track near Park Head, with a tunnel, the whole cost when completed being estimated at £230,000. When this came into active operation they hoped to have a water supply sufficient to meet all requirements for the next 25 years, without having to build a dam.

The York City Council, on the 2nd inst., decided that in view of the refusal of the Ministry of Health, it be an instruction to the Housing Committee to prepare and submit a non-subsidised scheme for completing the Tang Hall estate scheme forthwith.

At a meeting of Rowley Regis Urban Council, on the 25th ult., it was reported that the Ministry of Health had sanctioned the erection of 16 houses upon the site at Hill Road, Tividale, and a further 10 houses upon the site at Birmingham Road, Blackheath.

Lectures descriptive of the Priory and Church of St. Bartholomew-the-Great, West Smithfield, will be given in the church on Saturday, October 7, and Saturday, October 28, at 2.30 p.m., when the crypt and the cloister can be visited without charge.

The Dean and Chapter of Exeter Cathedral have received an offer of two additional bells to supplement the existing famous peal of ten bells in the south tower. The offer is under consideration, and it is understood that an expert is being consulted.

A figure of the Madonna by Della Robbia, which was stolen from a church near Sienna, Italy, some days ago, has been found in a field near the church. It is believed that the statue was stolen for purposes of reproduction, as it appears to have been in a mould.

Sir Edwin Lutyens, R.A., after staying at Balmoral for a few days in order to acquaint the King and Queen with the latest developments of the plans for the new Delhi, left on the 28th ult. for a three months' visit to India in connection with the building of the new capital.

The Cardiff Waterworks Committee have accepted the tender of the Jewell Expert Filter Company, of York, for the laying down of their specialised plant and the construction of twelve roughing filters in connection with the city's water supply. The contract price is £37,866.

In the course of the excavations at the Abbey ruins, Kenilworth, a very fine escutcheon, quartered with the arms of the Newburgh and Beauchamp families, has been found. It is in the usual shield-shape, about 4 in. across. The design is well-nigh in a perfect state of preservation, worked in inlaid enamel and gold.

Nottingham City Council on Monday last decided to spend £50,000 on a new park and recreation grounds, and £17,000 in grand memorial gates as a war memorial. A site of 36 acres on Trentside was given to the city by Sir Jesse Boot. Schemes for providing work for the unemployed, involving an expenditure of nearly £100,000, were adopted. A new rate of 4½d. is involved.

Croydon Borough Council has decided to promote a Bill in Parliament to empower them to demolish Whitgift's Hospital of the Holy Trinity, which stands in Croydon at the junction of High Street and North End, and is a serious impediment to street traffic. The building, of which the foundation stone was laid in 1596, consists of a single quadrangle carried out in red brick.

On a contract for the extension of the electricity power station belonging to Derby Corporation a saving of £12,543 is claimed to have been saved by the employment of direct labour. The lowest tender received from a private firm of builders, as adjusted by omissions and extras, was £39,561, and the work has been done for £26,168, while 50 per cent. is allowed for depreciation of building and plant.

Extensive schemes for the erection of new school buildings were foreshadowed in the recommendations of the Finance Committee at Monday's meeting of the Middlesbrough Education Committee. The proposals included the erection of a public elementary school on the Marton Grove housing estate, the erection of a secondary central school upon the William Fallows School site, and the extension to the Kirby Secondary School.

Mr. Percy P. Tubbs, F.R.I.B.A., P.P.S.A., informs us that he has taken into partnership his son, Grahame Burnell Tubbs, A.R.I.B.A., who has been in his office for the past five years, and Mr. R. A. Duncan, also an Associate of the Institute, and who was until recently engaged on the teaching staff of the Architectural Association Schools, Bedford Square, W.C. In future the firm will be known as Percy Tubbs, Son & Duncan, and will continue to practice architecture and surveying at 10 Gray's Inn Square, W.C.1.

Mr. James Barlow Fraser, who was at one time one of the best-known architects in the West Riding, died on Sunday last at his residence, Leeds, in his 87th year. He underwent an operation the previous week, one of his legs having to be amputated. Pneumonia, however, set in, and this proved fatal. For a great many years Mr. Fraser was a Fellow of the Royal Institute; he was one of the early members of the Leeds and Yorkshire Architectural Society, of which he was president for one or two years. He retired from active practice some years ago and pursued his favourite hobbies of sketching and painting. He leaves a widow, three sons, and eight daughters.

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Some Reflections on Housing.

The daily press in every part of the country continues to show a great interest and much perplexity in the subject of the measures which should be taken to promote and expedite the provision of additional accommodation for the working classes, but certain vital considerations appear to have been overlooked and certain other factors have been given undue weight.

Fifty years ago every class in the community paid for the accommodation that sufficed for it, and, broadly speaking, no class was very much concerned with the defects of houses which other people were satisfied to dwell in.

In recent years there is an evident tendency on the part of the public as a whole to consider that no one should live except under conditions which appear to the enlightened to be adequate and satisfactory.

This may be a good sign, but on the other hand it carries with it a danger and implies a responsibility, and one which it is possible the public as a whole are not willing or able to take on their own shoulders.

For if we take the wages of a large part of the working classes to vary between £1 10s. and £3 10s. a week, we should ask ourselves first what part of such a sum the wage-earner can be expected to pay in rent; and if we come to the conclusion that it is impossible to expect a married man with children to set aside out of his wages a sum which will suffice to provide him with a standard of accommodation considered by another class of the public adequate and satisfactory, either a lesser standard must be accepted and permitted or else the public or the State must make good the deficiency.

But if the State, by housing legislation like that of recent years, does so, it is speedily found, as has been the case, that the State cannot find sufficient funds; for it has embarked on what is, in plain language, a great charitable undertaking financed by its richer citizens.

It is obvious at the outset that there are certain extreme conditions which are so dangerous to health that the public, through its laws, must carry out preventive measures at the cost of the community at large. The removal of people suffering from infectious diseases to hospitals supported by the rate-payers is one case in point, the clearance of slum areas is another, and the provisions of the Poor Law, which enable everyone in the country to obtain food and lodging under certain conditions, are a third; but these may all be said to be emergency measures, which do not necessarily apply to less extreme cases of difficulty.

Is there any sound reason for insisting on standards in our elementary schools, which are very expensive if ideally hygienic, if those standards are greatly in advance of others which must govern the lives of the children taught?

A well-known London oculist who had to examine the eyes of a large number of children attending Board Schools stated that the eyesight of slum children was

as a rule better and not worse than that of the children who lived under more favoured conditions, because the size and accommodation of their homes automatically made it necessary for them to spend a greater proportion of their time out of doors in all weathers; and it is possible that this circumstance affects their health beneficially in other respects. We are not arguing from an isolated fact that bad conditions should be acquiesced in, but pointing out that disadvantages may in many cases be more or less automatically corrected, and that it is possible for theorists to form erroneous views on apparently simple questions.

The housing question, like every other, must be settled on an economic basis. The wage-earner must use his efforts to secure the highest wage for himself compatible with the employer's return being sufficient to induce him to continue in business; and the amount of the wages earned must ultimately govern the proportion of the rent which the worker can pay and his other living charges. If the standard wage is, or must be, low, the class of accommodation which can be paid for must necessarily be a reduced one. Because a certain proportion of the population consider that daily baths are a necessity, it does not follow that many working men would not be better pleased to do without a bathroom than to pay the extra rent which its provision renders necessary; and because it is the pride of certain classes to have a sitting room, only used on infrequent occasions, it does not follow that the State when building at the taxpayers' expense should provide them at a loss.

The eagerness with which people avail themselves of the roughest and most primitive types of building provided they can get them at a low enough rent proves to us that it is bare accommodation rather than conveniences for which a large number of people are willing to pay. A copper used once a week will provide all the hot baths many families consider essential without the cost of plumbing, the remaining hot water being provided by kettles boiled over a fire. Fireplaces in bedrooms are not essential, and if used may well be limited to one bedroom. Gas and gas cooking apparatus are usually fairly cheap and a great convenience, but the same conditions do not often apply to electric wiring and lighting. If we omit what is not essential, we should arrive at a cheaper type of dwelling than any contemplated under the State Housing Scheme, which holds back a certain class of speculation; while income from rates in most districts would, we believe, be unaffected by the change, as without some such assurance little speculation in housing is likely. To these might be added the granting of loans to builders on the lowest economic rates possible.

The two directions in which we believe the State could help the solution of housing difficulties are the exemption of housing of a certain class from rating, either permanently or for a considerable term of years, and the repeal of the Rent Restriction Act.

Our Illustrations.

MAYFAIR HOUSE, CARLOS PLACE, GROSVENOR SQUARE, W. BANK PREMISES AND FLATS FOR THE LONDON COUNTY WESTMINSTER AND PARR'S BANK, LIMITED. EDMUND WIMPERIS AND SIMPSON, ARCHITECTS.

We are glad to illustrate this admirably simple and architectural Georgian design, which is a relief after the usual type of bank and insurance buildings, whose architect's work frequently looks like the over-ostentation of a wealthy woman desirous of exhibiting the cost of her costume and accessories. The building has a note of dignity, while it has the necessary accentuation to mark it as a building serving a purpose of importance.

The builders were Messrs. Holloway Brothers, Ltd.

Messrs. Kleine Patent Fire-resisting Flooring Syndicate, Ltd., were responsible for the fire-proof construction of the building.

The constructional steel was supplied and erected by Moreland, Hayne & Co., Ltd.

Passenger lifts were supplied by Waygood-Otis, Ltd., and the bank hoist by Smith, Major & Stevens. The heating and ventilating was carried out by Messrs. W. & H. W. Gould, Ltd. Ornamental metalwork, including staircase balustrading, lift enclosures, balcony railing, window grilles and laylights, were

manufactured and fitted by J. W. Singer & Sons, Ltd., Frome, Somerset. The decorative plaster work was executed by Messrs. Battiscombe & Harris, Ltd., and G. & A. Brown, Ltd. The stone carving throughout was executed by Gilbert Seale & Sons, 23 Lomond Grove, Camberwell. The marble was supplied by W. B. Simpson & Sons; the sanitary fittings by John Bolding & Sons, Ltd.; the rubber paving by Art Pavements and Decorations, Ltd.; the grates, chimneypieces and ordinary stoves by Bratt, Colbran & Co.; the kitchen ranges by Clark, Hunt & Co.; the iron fire escape staircase by Messrs. The Safety Tread Syndicate, Ltd.; the flooring and woodblock flooring by "Zeta" Wood Flooring Co., Ltd.; the door and window furniture, etc., by Stedall & Co.; the pavement lights and skylight by Messrs. Haywards, Ltd.; the electric light fittings by Trlegars, Ltd.; special bank fittings from the architects' designs by Howard & Sons, Ltd.; Portland stone by Messrs. Barnes and The Bath and Portland Stone Firms, Ltd.

Notes and Comments.

A Well-known Official.

The Dundee City Council have ratified an agreement under which Mr. James Thomson relinquishes the office of City Engineer at a salary of £1,025 to become City Architect at a salary of £750. Mr. Thomson, who has been in the employment of the Dundee Council for 50 years, has by his energy and ability been of great service to his employers, but like other able and energetic men he does not seem to have met with full recognition from those he has served so efficiently.

We do not know that those who are in the service of English towns in all cases lie upon beds of roses, but judging by newspaper reports we should be inclined to say they are better off than their colleagues north of the Tweed.

We sometimes imagine that on a Scotch Council the type of man deposited in "The House with the Green Shutters" is sometimes to be found, but in this we may be in error.

Cost of Housing.

The Garden Cities and Town Planning Magazine give illustrations of the types of working class houses which are being built in Nottingham and Leicester at a cost of £298 18s. 9d. and £299 respectively. Both are good examples of simple, direct planning: the Nottingham houses, designed by Mr. T. C. Howitt, are in addition pleasing in appearance. In Nottingham the Corporation have been exceedingly fortunate in the choice of their architects, and the general architectural excellence of the housing produced reaches an unusually high level. The Nottingham houses form a row of eight, while the Leicester design is for semi-detached houses, and therefore would be in many ways a little more costly, all factors being taken into consideration. But in the Leicester design no attempt has been made to make it architecturally pleasing. It is a simple utilitarian design with which every element which makes for economy has been carefully considered.

Town Planning.

Amongst the many papers on the subject of the necessity and advantages of town planning and the importance of reconstructing urban built over districts one point has not perhaps been sufficiently emphasised. We refer to the spaces not fully utilised which abound in all our towns and could with great advantage be more completely covered by buildings. The growth of our towns has been too spasmodic and irregular, and expansion has in many cases taken place in new districts when open and partly developed areas still remain in the developed districts. A process of building up is badly needed, for one of the greatest charms of an old city is that the building in is more complete and thorough than is the case to-day, and that open country succeeds to and surrounds urban districts.

A Sign of the Times.

If preceding Victorian generations could give us their impressions of the changes which have elapsed since their days we believe they would express their astonishment at two alterations in character which have taken place in our papers. Not only has the "Times" shown a disposition to give us illustrations, but the "Queen," which used to rigidly confine itself to the secrets of ladies' costume and the details of Court news, is now giving a series of illustrations of country houses and schools which resemble those which we have associated with "Country Life." We welcome the change, as it shows that women are becoming more interested in questions of building, and possibly some of the money which was rigidly reserved for dress allowances or pin money may serve to found a fund for the carrying out of building work under the direction of architects. It is in fact as difficult to find a paper now which in some form or other does not concern itself with some aspect of building or other as it would have been to find one which did in the 'sixties and 'seventies of last century.

Slavery and the Pyramids.

Slavery in Egypt never attained the serious and infamous proportions that obtained in Greece and Italy, according to Professor Flinders, who added that great nonsense had been talked about the opposition of hardships involved on building the Pyramids. The forced labour required was taken at the season of the inundation of the Delta, when men could not work on their lands, and in all probability men only gave their labour twice in a lifetime. The building of the causeways occupied 10 years and that of the Pyramids 20 years. Great organisation must have been required, and the people gained by such examples of united effort. We have no doubt that Professor Flinders is correct, but what a loss it is to see one of our favourite illusions sapping away, for since our earliest years we have been accustomed to regard the monuments of Egypt as the most tangible record of oppression in the world.

A Visit to Messrs. Chubbs' Works.

Messrs. Chubbs organised a most interesting visit to their works at Wolverhampton last Wednesday, at which a large number of distinguished guests were present, including the High Commissioner of Australia (the Rt. Hon. Sir Joseph Cook), Admiral the Hon. Sir Edmund Fremantle, G.C.B., Sir Felix Schuster, Bart., Dr. Sergio Garcia Uriburu, the Consul-General for Argentina, together with representatives of a large and influential number of banks, railway companies and steamship companies, as well as the late President of the R.I.B.A., and other leading architects and professional men. The party left London by a special train at 9.45, returning to Euston at 8.30 p.m.

Luncheon was served at Messrs. Chubbs' Wolverhampton works, and tea at the Wednesfield Road works, and dinner on the return journey. Every arrangement had been made with careful attention for the comfort and convenience of those present, and all much appreciated the firm's lavish hospitality.

Every process of safe and lock making was seen in operation at the works, for Messrs. Chubbs' reputation is one which rests on solid achievement, in which they need fear no competition from any rival. It was interesting to learn that Messrs. Chubbs have started branch works in Australia, the output of which has already reached large figures, even exceeding for one special month that of the parent establishment. Sir George Hayter Chubb made a presentation during the course of the day of gold watches to four of the workmen who had been in the firm's employ for over 50 years, and alluded to the fact that he himself had been connected with the business for over 57 years. Though the reputation of a firm which is employed by a great number of the leading banks and corporations in the world needs little additional publicity, Messrs. Chubbs' guests were greatly impressed by the impressions gained of the firm's achievements in a field they have made their own.



LONDON COUNTY AND WESTMINSTER BANK, CARLOS PLACE. Messrs. WIMPERIS & SIMPSON, Architects.
(Carving by GILBERT SEALE & SONS.)

Competition News.

Members and Licentiatees of the Royal Institute of British Architects must not take part in the Old Cranleigh Society Cricket Pavilion Competition because the conditions are not in accordance with the published regulations of the Royal Institute for architectural competitions.

Members of the Society of Architects are also requested not to take part in the above competition without first ascertaining that the conditions have been approved by the Council of the Society.

Royal Academy Exhibition of Decorative Art.

The President and Council are now making arrangements for the Decorative Art Exhibition which is to be held in January and February, 1923, and which is primarily intended to illustrate and promote the application of the arts, in their several forms, to the permanent decoration of buildings. It is thought that the time has arrived for a public review of the possibilities in this field of art, and it is confidently expected that there will be a large response from British artists, and that they will show themselves fully capable of carrying on and developing the great traditions of such work in the past.

The Exhibition will include architectural decorations in painting, mosaic, tapestry, sculpture, carving or metal-work; designs, cartoons or models for such decorations, and designs for stained glass; and there will also be an Arts and Crafts Section, which is being arranged in collaboration with the Arts and Crafts Exhibition Society, and will be limited to exhibits by members of that Society and other craftsmen who have been asked to submit works.

Works will be received at the Royal Academy on December 15, 16 and 18. Any application for forms and labels, and other information, should be made during November to the Secretary, Royal Academy, Piccadilly, W.1.

Correspondence.

"Modern Methods in Building Construction—XXXIII."

To the Editor of THE ARCHITECT.

SIR,—Referring to the above appearing in your issue of September 22, we note that Mr. Lakeman points out that the suspended scaffolding, the advantages of which he so aptly describes, can be obtained on hire in "America." May we be allowed to state that this suspended scaffolding can also be hired in Great Britain from the undersigned company, who will be pleased to give any information in connection therewith.

May we also state that this company has in stock hundreds of these machines ready for immediate despatch to any job in any part of Great Britain, for which territory we have been appointed sole agents.—Yours, &c.,

SCAFFOLDING (GREAT BRITAIN) LTD.

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43, Lansdowne Road,
Stockwell, London, S.W.8.

[Scaffolding (Great Britain) Limited now incorporates The Tubular Scaffolding Co. Ltd. and The Patent Rapid Scaffolding Tie Co. Ltd.—Ed.]

"The Architect" Fifty Years Ago.

OCTOBER 12, 1872.

AN AUTHORITY ON AN ART-TREASURE.

He stood—the Chief Commissioner of Works—in Leicester Square,

And contemplated the remains of British Sculpture there,
Where once a Horse and his Rider stood—but the Horse now stands alone.

A chasm gapes wide in his foreshore; of the Rider all is gone.

"Ha!" cried our gracious Minister. "Fine relic of the antique.
Like Greek and Roman statues, but particularly Greek.
'Tis mutilated very much, and so are most of those;
Some want an arm, and some a leg, and some have lost a nose.

"At Athens had it been dug up, or the River Tiber nigh,
The Papers would have said it was a thing we ought to buy.
On images much money to lay out I'm not inclined;
But still one may preserve them when one has the luck to find.

"To save it from destruction, now, suppose I send it hence.
It will not put the nation to a very great expense,
If put in the Museum—in the British, which contains
So extensive an assortment of like classical remains.

"There are the Elgin Marbles, at which I could never play.
There it can keep them company, for people to survey.
'Tis true that for an Ædile's post I'll own I'm not the hand;
But I flatter myself that's a work of Art which I do understand."
Punch.

London Art Galleries.

(All rights reserved.)

The autumn exhibition of the Grosvenor Galleries, to which I have already called attention in these columns, is now opened, the four artists exhibiting being Sir Charles Holmes, Mrs. E. Granger-Taylor, R. G. D. Alexander, and A. S. Hartrick, R.W.S. The water-colour drawings by Sir C. J. Holmes occupy the first room (Large Gallery) on entering, and deal mostly with the scenery of Lancashire and Westmoreland, showing good colour in such subjects as "Fells above Warcop," "Coupland Beck," "Ridges of Saddleback," and "Glaramara"; and in the next room (Long Gallery) we find the portraits and a few landscapes by E. Granger-Taylor. There is a curious sameness of type in these portraits of women—such as "The Invalid," "Clive," "Girl in Striped Blazer," "The Primrose Dress," "The Leather Jacket"—which extends even to the "Boy in Blue Head-dress," who might very well pass for a girl. It is not a prepossessing type, but has its own charm, and seems to repeat itself to some extent in the really delightful "Self Portrait," which is one of the best things here, as "The Young Artist" is one of the worst. Sincerity of drawing and reserved but rich colour are apparent in these portraits; and the design for the April cover of "The Times" Woman's Supplement of 1921, to which I have already alluded, is clean in colour and simple in treatment. The artist is less successful in her "Pygmalion," where the first impression is that all the very indifferent statues in this early master's workshop have woken to life,—though closer inspection reveals them as being, like the sculptor himself, at their devotions, save only the special lady of his dreams, who seems to be expressing her feelings in a form of step-dance: the portraits here deal with the world of reality and are on safer ground.

In the next room R. G. D. Alexander seems at his best in boats, such as "Boats and Sky," "Low Tide," and the "Bathing Machines," which, if not boats, at least depend on the sea for their living; but I should except his "Late Afternoon," which, with its low horizon and finely-handled sky, is one of the best things shown here. On the other hand, his trees are singularly poor and uninspired, wanting, in such a scene as "Trees and Bare Field," in any attempts at subtlety or definition of type. Lastly we come, in the last room, to Mr. Hartrick's figure studies in watercolour of Scotch lassies and Cotswold peasants, from which he escapes in his "Christmas Eve," which, with the radiance of light streaming from the happy Mother and Child on the worshippers in the night without, attempts a problem which Correggio has handled in the famous painting called "La Notte," of the Dresden collection. The two Cotswold studies of a "breast-plough" (we are not surprised at the title "Weary") are admirable in type and drawing.

On the same day as the Grosvenor autumn display, the St. George's Gallery, in Hanover Square, opened again with an exhibition of the art of Také Sato. I had the opportunity of a talk with the artist himself about these delightful paintings on silk, and he tells me that he mixes his own colours, which are mostly mineral, and often from such stones as lapis lazuli or the peacock stone, used with a medium of gelatine, which has to be warmed. The result, on this silk ground, is one of great delicacy and richness of colour, and at the same time the artist's drawing, specially of architectural subjects, which frequently occupy him, is careful and very correct.

All these drawings are, I believe, done throughout with the brush, as the Japanese use to work. Mr. Také Sato has been recently in Bruges, and we see the results of this visit in some delightful drawings here, such as the "Canal de Damme" and "New Moon, Quai des Augustins," as well as a moonlight study of "Eglise Notre Dame." He was so fascinated with the old Flemish city, the "Venice of the North," that he never left it even to go as far as Ghent: but Mr. Sato has been, I understand, for several years now settled in Chelsea, and his paintings of "Albert Bridge," "Chelsea Church," and "Battersea" (a very beautiful night effect) go back to the Chelsea of Greaves

and Whistler. His "Sunset from Albert Bridge" here just seems to me to illustrate the difference of the Japanese point of view—for the iron binding-rods, which to us might seem an ugly, if necessary, detail, become with him an exquisite pattern outlined against a sky of rose and orange. He tells me that he makes the drawing on the spot, with colour notes, but prefers to finish the painting in his studio: the Bruges studies, for instance, were often finished in London.

David Cox is one of the greatest masters of our British School, and the volume just issued by "The Studio" brings him before us in a particularly interesting way. This is not a volume on the great water-colour artist, though the "Foreword," by Mr. A. L. Baldry, gives a valuable appreciation of his genius in art; but it is actually a reprint of the "Treatise on Landscape Painting and Effect," by David Cox himself, with the set of drawings in line, sepia monochrome and colour which originally accompanied that volume, the twenty colour plates being reproduced from the aquatints which were part of the original illustrations. This last feature is quite right, even if by modern colour methods better results might have been obtainable, for the volume is thus a complete record, and we have here exactly before us the teaching on this art of one who was not merely a great master of it, but, like so many of his contemporaries, like Cotman and De Wint, was a practical teacher of water-colour painting.

What David Cox has to tell us is surely worth listening to; and what he has to say, first of all, is this: "Get your drawings absolutely right." In his own words: "It will be necessary for him"—the student—"to be particular in his designation of the outline . . . when he has gained this point he has more than half finished his work; while the author of a slovenly outline creates for himself an infinity of trouble." Next come his excellent remarks on light and shade, which he recommends to be first studied in sepia or indian ink, and to come later to the fascinating and complex problems of colour, "only to be learnt," he tells us, "by long and minute observation of the diversified tints and hues of Nature." In his method of laying on the tints he advises "the light, aerial tints be laid on the remotest parts of the picture, gradually brightening into richer and more decided tones as they approach the nearer objects, taking care to preserve the same atmosphere throughout the picture." It is more than a hundred years since this Treatise was first published, in 1813, yet have we got very much beyond this entirely sound teaching? As Mr. Baldry says: "His teaching is all the more worthy of attention now because it provides an antidote to the sloppy conventionalism which is poisoning much of the art of to-day"; and "The Studio" have done a good service to modern art in reprinting this old volume of a great British master's teaching on the art he loved, in its present attractive form.

I am reserving to next week the Leicester Galleries triple exhibition, which opens to the public on the day I write these notes; but looking into the Galleries yesterday, I was impressed with these cool, fresh studies of Lucien Pissarro, which seem to me almost a new revelation on his art.

At the Gieves Gallery Miss Mary Peachey is showing "Portrait and Southern Landscapes," mostly in oil, though I consider her two pastel portrait studies of "Mrs. Arthur Durandau" and "Simplicity," a girl's head, very southern in type, as among the best things here. Without going so far as the observer of life who said: "Women cannot paint women—they know them too well," I find that Miss Peachey's male portraits here, such as the study of a "Ratecatcher" and the "South American Portugee," have more character and better drawing than her ladies. The small landscapes deal with Algeria, Brittany and Holland.

S. B.

It is announced that H.R.H. the Duke of Connaught has kindly consented to unveil the Roll of Honour which has been erected at the Institution of Civil Engineers to the memory of its members and students who lost their lives in the War. The ceremony will take place at 4 p.m. on Friday, October 27.

Modern Methods in Building Construction.—XXXVI.

By Albert Lakeman, M.S.A., M.C.I.

STEELWORK ERECTION—(continued).

The most useful piece of equipment for work in connection with steelwork erection is the locomotive crane travelling on standard gauge track. When single-storey buildings are being erected the whole of the members can be handled by a crane and hoisted directly into position, and, in the case of multi-storey buildings, the crane will be used for hoisting all the steel for the lower part of the framing, and it will handle the remainder at the ground level up to a point where the actual hoisting is required. The steel will be heavy material to unload when received on the site, but the use of a locomotive crane will make the unloading a simple matter. The crane can work alongside the railway waggons or lorries and quickly lift the material out and swing it around to deposit same in convenient positions for subsequent re-handling. It can also travel with the load, and this will be very convenient when the members require sorting or stacking in different positions until required for use. When the bulk of the steelwork is on the site and the erection is in full swing, the crane can travel to the stacks, pick up the material wanted, load same on to a flat-bottom standard-gauge waggon, shunt the waggon with its load up to the building, hoist the steelwork from the waggon again and deposit each member within reach of the tackle used for raising the steel to the upper tiers, or in a single storey building put the member into its permanent position. This method of dealing with the steel will prove very economical and convenient, and it is so superior to the use of hand labour that no comparison is necessary.

An example of a locomotive crane at work on the erection

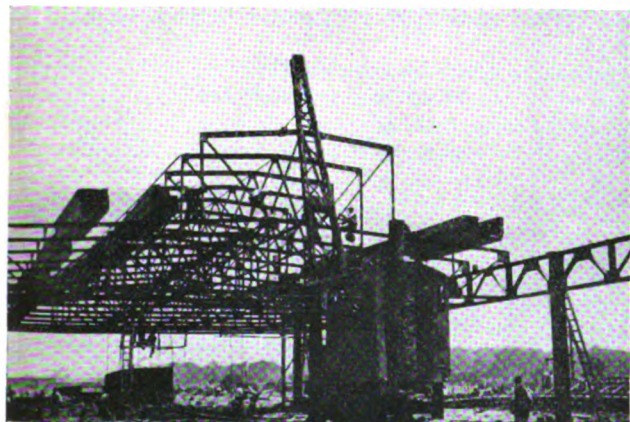


Fig. 177. ERECTING STEEL WITH LOCOMOTIVE CRANE.

of a single-storey steel-framed building is given in fig. 177. In this case a standard gauge track was laid down right through the centre of the building and the steel was taken from the railway waggon and placed in position. The steel roof trusses have a span of 60 feet and are of the monitor type, while the height from the floor to the underside of the main tie is 14 feet. The main truss was lifted as a complete unit, and the monitor or lantern portion was raised as a separate unit and held in position by the crane, while it was bolted and stayed to the main truss. The roof was covered with 3 inch planks with grooved and tongued joints, and when a number of trusses had been erected the required number of planks to cover the area were hoisted by the same crane in bundles and placed on the steelwork as shown. It will be realised that a considerable amount of time and labour was saved by this method as the crane gradually travelled back, leaving behind a framed structure with the bulk of the covering material hoisted to position all ready for distribution and laying at the high level.

Other illustrations of the use of locomotive cranes in steel erection are given in figs. 178 and 179. The first shows a crane with a comparatively short timber jib hoisting and placing some steel joists in the lower part of a structure, and the second illustration indicates the use of a crane with a long steel-framed jib hoisting some 60 feet span trusses in the high crane bay of a large engineering shop. It

will be readily understood that the use of a mobile mechanical lifting device is not only cheaper than any other method but is also much quicker, as the use of a stationary lifting pole



Fig. 178. CRANE ERECTING STEEL JOISTS.

or other arrangement necessitates considerable delay during the shifting of the equipment when each member has been hoisted before the next piece of steelwork can be raised. There are, of course, cases when it is not practical for some

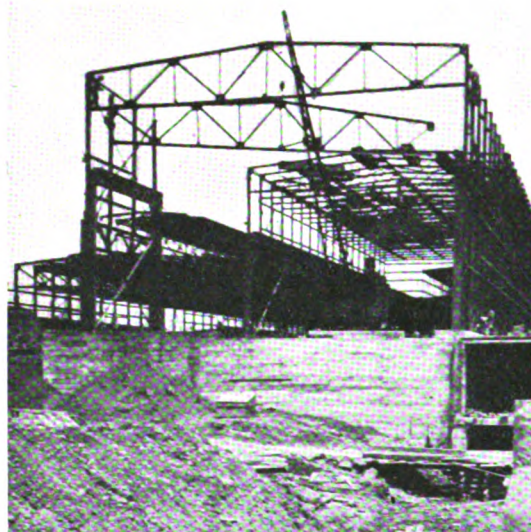


Fig. 179. CRANE WITH LONG JIB.

reason or other to bring a locomotive crane up to a position which will enable it to handle effectively the whole of the steelwork up to its position in the work, and it must then be supplemented by other equipment as required. An instance of this kind is shown in fig. 180, when the crane could be arranged to take one line of stanchions and one end of the roof trusses only. A lifting pole was therefore arranged to take the other end of each truss and the steel was all handled by the crane up to the point when actual hoisting commenced and the pole then came into operation for the final vertical lift, and although this method is not so efficient as that when the crane can be employed alone it reduced the pole work to the minimum and simplified all the preliminary manœuvring.

On some schemes it may not be possible to use a locomotive crane for any of the erection, even in a single-storey structure, and an ordinary lifting pole or "stick" then becomes a necessity. The method of applying the pull or force for the raising of the steel, however, is one which frequently allows scope for labour saving, as the pull may be exerted by a crane situated some distance away, by an industrial locomotive or even by a team of horses, according to the circumstances of the case.



Fig. 180. CRANE AND POLE ERECTING STEELWORK.

In fig. 181 the steelwork is being erected by the use of a gin pole and a locomotive travelling on a narrow gauge track at the other end of the building, and in fig. 182 the steel is being hoisted by the adoption of a gin pole and a team of horses.

In both these cases the methods were quite satisfactory, and they were applied because they appeared to be the most economical and suitable under the special circumstances which governed the execution of the work. The use of

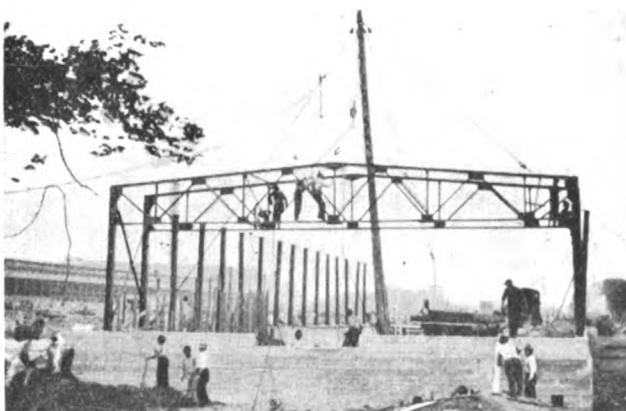


Fig. 181. POLE AND LOCOMOTIVE FOR HOISTING STEEL.

hand labour for hoisting should be eliminated wherever possible, as it is both slow and costly, and in addition the use of hand labour places a limit on the weight that can be lifted, although the use of movable pulleys will, of course, reduce the actual pull required to less than the actual weight of the member.

On the erection of multi-storey buildings of some magnitude it is a common practice to erect the lower members with a locomotive crane, and from the first tier of steelwork at one end raise a portion of the second tier to form an elevated platform upon which a mast and jib can be erected. This jib is then able to command the erection of the adjoining steelwork, and as the second tier progresses the mast and jib are moved forward until the other end of the building is reached. A portion of the third tier is then erected and the jib and mast raised to the new level, when the process is repeated and the whole of the third tier is put up. In some cases two or three tiers are taken at one time by raising the jib to a higher level in the first instance. When the multi-storey building covers a large area, this method is preferable to the use of a stationary crane, owing to the impossibility of covering the whole of the building without putting up several cranes which would only be engaged for a part of the time occupied by the operations.

An illustration of the method of elevating the jib and mast on the steelwork already erected is shown in fig. 183, where the first tier is in position on the lower reinforced concrete storey, and the hoisting arrangement has been raised to command the high-level work. In this case the crane worked back from the steelwork, as by this method

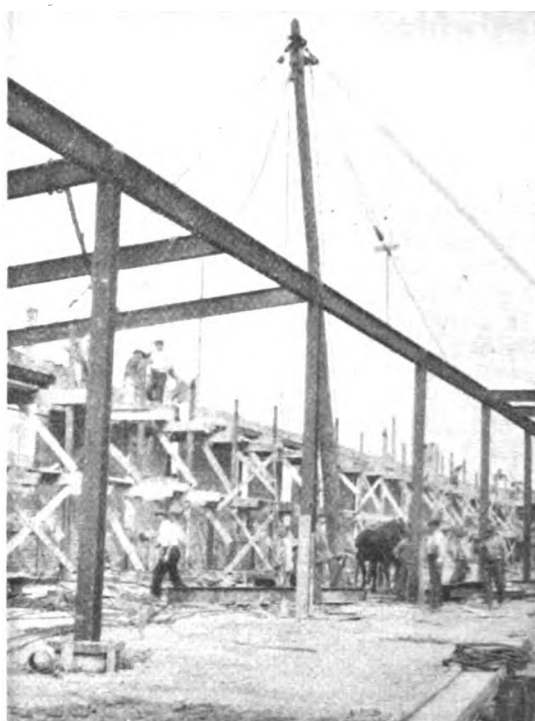


Fig. 182. POLE AND HORSES FOR LIFTING STEEL.

it was able to handle more efficiently the steel plates for the large bunker which is under construction. When the jib is situated at the high level the hoisting can be, and is usually, carried out by the use of a steam or electrically operated winding drum at the ground level, which is stationary, and thus the heavy portion of the equipment does not have to be frequently moved to keep pace with the operations.

In some schemes in America where small stanchions for single-storey buildings are to be erected a rather unusual method is sometimes adopted. This method consists of sending the stanchion to the site with the base arranged

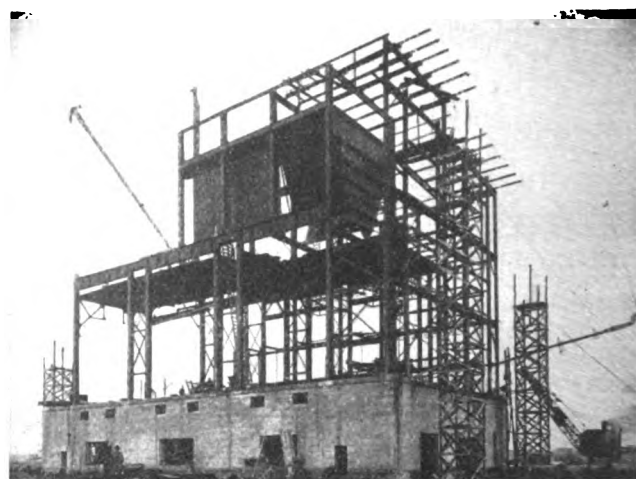


Fig. 183. JIB AND MAST ELEVATED ON STEELWORK.

as a detachable unit, and when the foundation is being formed this base plate is placed in position and accurately levelled in all directions to avoid grouting at a later date. If this plate is *absolutely* accurate when the foundation is finally completed and the length of the stanchion is quite perpendicular to the base plate when bearing on the whole area of the cross section, the cleat on the stanchion can be bolted directly to the plate, and the stanchion will be quite plumb. The reason for the adoption of this method is the saving of time that will result if the steel can be erected in a perfectly plumb position without wedging or grouting after it has been placed, and the bolting up and riveting can proceed uninterruptedly behind the main steel erectors. In practice, however, the author does not consider this method satisfactory, because it necessitates an accuracy in setting the base plate that can seldom be depended upon, and any slight shrinkage or movement of the concrete

immediately under the plate during setting will result in the stanchion being out of plumb unless a partial bearing only on the plate is given. Another method sometimes adopted is that of preparing an accurate bed for the base plate by rendering the top of the foundation with cement and sand to give an even bearing without the use of grouting. This scheme is also unsatisfactory, owing to the shrinkage that takes place during setting and the risk of damage to the bed during the steel erection, and the method should not be permitted in any work of importance. The correct method to ensure good and accurate work is that of erecting the steelwork on foundations that have been brought to a level which allows all the bases to be grouted. The steel should be placed in position, accurately plumbed and levelled and wedged up with suitable steel wedges to avoid any possible displacement, and the bases should then be thoroughly grouted up to ensure an even bearing over the whole surface of the plate.

Steelwork frames have occasionally collapsed when partially erected and before the bolting or riveting up has been completed owing to the lack of rigidity, and failure could have been easily prevented if simple precautions had been taken. The best method that can be adopted is the introduction of steel guy wires having an adjustable attachment or joint which enables them to be quickly applied to the stanchions when erected to give a simple form of cross-bracing by running the guys diagonally across the width of the structure to prevent overturning.

In some structures these guys can also be profitably employed to brace the steelwork in the direction of the length of the building, as collapse has been known to occur in this manner by the steel vertical members all falling in one direction to overlap one another, like a pack of cards. The use of rigid struts or braces is likely to prove difficult and expensive when they are required during the erection only, whereas flexible ties that are introduced as tensional members are easy to apply and can be quickly removed when the structure has been made permanently secure.

When the members of a steel frame have been erected no time should be lost in getting the work accurate and proceeding with the permanent bolting or riveting. Considerable difference of opinion exists among engineers as to the relative merits and demerits of bolting and riveting in ordinary structural work. There can be no doubt that riveted work is preferable in important work, as the members are rigidly connected, and the holes in the members and the gusset plates are entirely filled with metal in a permanent manner. There is also no risk, as with bolts, of the joints being undone at a later date by a careless or ignorant workman, who may draw the bolts to make a temporary attachment of some kind and later on remove this attachment and omit to replace all the bolts.

The use of bolting, however, is frequently very convenient, as it allows the material to be shipped to the site in small units, which can be bolted up as required by the erectors without the need of a special riveting gang. In good work, however, riveting should be insisted upon for all important connections, and in order to enable the erection to proceed quickly the members are bolted, in the first instance, with sufficient bolts to ensure stability, and these bolts are replaced by rivets as the riveting gang follows along behind the erectors. In a very large building, and where considerable changes of temperature take place, some provision must be made for expansion and contraction, and the rigidity of riveted joints makes this difficult. A practice followed by the author under such circumstances is that of making all the connections across the width of the building with rivets, while all the longitudinal joints are bolted only. The greatest stability will be required transversely, and the riveted joints in this direction ensure this, while the maximum expansion and contraction will be in the direction of the length, and by the use of bolted connections there will be sufficient freedom to prevent the accumulation of all the movement at the ends of the building, with the consequent risk of the external walls being thrust over. The riveting on a large scheme can be

carried out expeditiously if a small air compressor with compressed air receiver is installed, which will enable pneumatic riveting to be done. The installation is quite a small piece of equipment, and the air pipe lines can be of small diameter and laid temporarily in any convenient position, with some flexible piping at the point where the work is proceeding.

When a compressed air plant is installed it will also be possible to use pneumatic hammers for cutting away and miscellaneous work after the steelwork has been erected, and time and money will be saved in this direction.

Steelwork frame construction has now been adopted for many years, but it is still a recognised modern method which is extensively employed, and it is necessary for all architects, engineers and contractors to be conversant with good practice in order to prevent possibility of failure. Unfortunately, there is a great tendency to obtain schemes and estimates for steelwork from firms who are asked to quote without any particulars or limitations as to the size of members to be employed. If the order is placed with the firm quoting the lowest price, there is a risk of accepting a scheme which is based on a low factor of safety in the effort to reduce the price to the lowest possible figure, and if the architect is not conversant with steelwork design and calculation, and a capable engineer is not consulted, the order will be given to the firm submitting the weakest scheme, which is not necessarily the cheapest on a price per ton basis. This method has been responsible for some of the failures in the past, but the danger does not appear to be realised by architects generally. When schemes and prices are obtained in this manner the steel should be carefully checked by a competent calculator before an estimate is accepted. A notable instance of the failure of steelwork is that provided by the collapse, recently, of the roof of a large picture palace in Washington, U.S.A., where the contractor was allowed to carry out steelwork which had not been checked, and the architect apparently gave his approval although not conversant with the principles of steelwork design. This is a recent case which aroused considerable public interest when the failure occurred, but which was probably forgotten by the majority before the inquiry into the cause was completed and the facts could be published.

The duties of the architect cover the sound construction of a building as well as the architectural treatment, and a good knowledge of frame construction, whether of steel or reinforced concrete, is therefore essential if he is to carry out his duties efficiently.

(To be continued.)

PART I.—I. Introduction, Steam shovels, Jan. 13; II. Steam shovels, Trench diggers, Jan. 20; III. Grab buckets, scrapers, Jan. 27; IV. Drag-line excavators, Feb. 3; V. Derricks and cranes, radial loader, paving-breakers, Feb. 17; VI. Surplus Soil Transport (Hand Labour), Feb. 24; VII. Surplus Soil Transport (Horse-drawn wagons, Steam-driven wagons), Mar. 3; VIII. Surplus Soil Transport (Steam-driven wagons), Mar. 10; IX. Surplus Soil Transport (Steam-driven wagons, Petrol wagons, Narrow-gauge track with wagons), Mar. 17; X. Surplus Soil Transport (Narrow-gauge track with wagons, Trucks on Standard-gauge track, Electrically-driven trucks and vehicles), Mar. 24.

PART II.—XI. Foundation Work (Ordinary soils, Soft soils), April 7; XII. Foundation Work (Soft soils), April 17; XIII. Foundation Work (Soft soils), April 21; XIV. Foundation Work (Soft soils), April 28; XV. Foundation Work (Soft soils), sheet piling, May 5; XVI. Foundation Work (Soft soils), steel-sheet piling, May 12; XVII. Foundation Work (soft soils), steel-sheet piling, pumping, May 19; XVIII. Foundation Work (Soft soils), pumping, May 26; XIX. Foundation Work (soft soils), foundation piles, June 2; XX. Foundation Work (soft soils), foundation piles (cont.), June 9; XXI. Foundation Work (soft soils), foundation piles (cont.), June 16; XXII. Foundation Work (soft soils), Waterproofing, June 23; XXIII. Foundation Work (soft soils), Waterproofing (cont.), June 30; XXIV. Waterproofing (cont.), July 7; XXV. Water Supply, July 14; XXVI. Concreting, July 28; XXVII. Concreting (cont.), August 4; XXVIII. Concreting (cont.), August 11; XXIX. Concreting (cont.), Aug. 18; XXX. Concreting (cont.), Aug. 25; XXXI. Form Work, Sept. 1; XXXII. Form Work (cont.) Sept. 8; XXXIII. Brickwork, Sept. 22; XXXIV. Superstructure Frame, Sept. 29; XXXV. Superstructure Frame (cont.) Oct. 6.



BRADBOURNE, LARKFIELD, KENT. WEST FRONT (1713).

Bradbourne.

The Kent historian, Hasted, in writing of Bradbourne, tells us that there are "few seats of private gentlemen that exceed it either in convenience, beauty or pleasantness"*; and its interest is doubled to-day by the fact of the conservative preservation of all of the essential features of the house from the date when Hasted wrote.

Bradbourne is a red brick house of which nearly all the visible structure is characteristic of the vernacular building of the early eighteenth century. Large parts of the original Tudor house, which was evidently built round a small courtyard, remain, however, traceable though embedded in the later structure; and there seems to have been a gallery running across the house from north to south, in which the oak panelling, dating from the late sixteenth and early seventeenth century, which still exists in the house may have been used. The house has been occupied by the Twisden family from before 1659 to the present day, but it was not until 1713 that it was remodelled by Sir Thomas Twisden, this date, with the initials of Sir Thomas and his wife, being cut in the leadwork of the western pediment. The date is confirmed by a letter of Miss Isabella Twisden (dated November, 1715), which speaks of Sir Thomas as having "made it a very fine place but there is very little of it furnished yet." The stables—originally, no doubt, an orangery or banqueting house—date also from Sir Thomas's rebuilding of the house, and the traces of the blocked-in window apertures can still be seen in the walling. The wide cornice was originally painted with festoons, birds and butterflies, traces of which were discovered when repainted. The completion of the furnishing and decorations of Bradbourne may have continued until Sir Thomas's death in 1728, but from that date until 1737 it is unlikely that any work was undertaken, as the owner during this period spent most of his life abroad.

The main façades (west and south) are illustrated, the entrance or north front, which has two salient wings at each end and a central doorway protected by a later porch, being of less interest. There is an entrance also in the centre of the west façade, but this can have only been for summer use, as it opens into the great hall, which is a living-room. The rubbed red brick of the angles of the pilasters and the aperture of the central window in the first floor contrast effectively with the rougher yellower brick of the walling and with the white-painted entrance doorway. The three centre windows are, as is usual in larger houses, grouped under a pediment; at the angles are brick pilasters, and above the wooden cornice is a panelled parapet which partly screens the roof and dormers. The doorway,

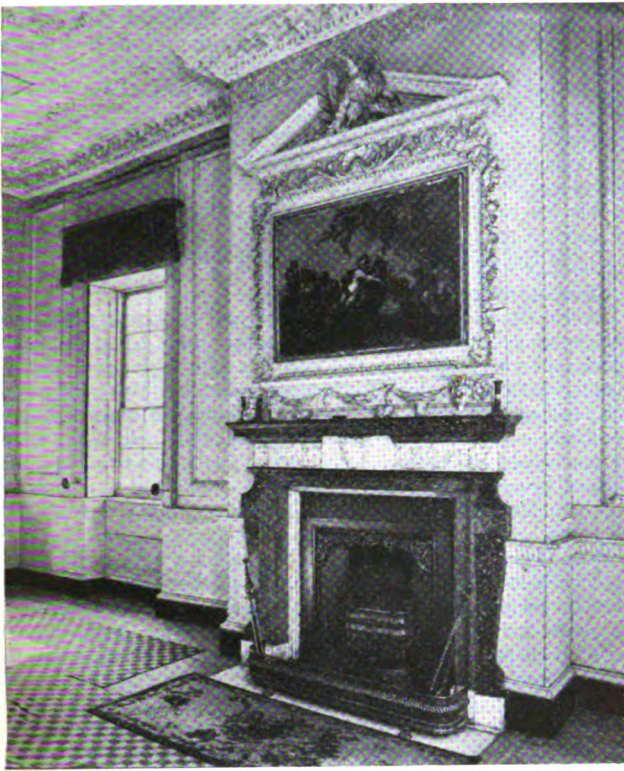
flanked by Corinthian pilasters, has a fine fanlight with noticeably fine tracery, which was inserted during the 1774 alterations.

On the south front the horizontal lines are again emphasised, and there is less stress laid upon the vertical lines of the brick dressings which connect the ground and first floor windows, and the brick niches, which obtain an effect of depth by skilful use of contrasting bricks and which are the central feature of each wing. The use on the ground floor of oval windows set within a large oblong panel of deeper red brick is an unusual feature; and these windows on the south-west serve no purpose, as they are screened within doors by the wainscoting. The large semicircular bay is an addition of Sir Roger Twisden, who, succeeding in 1772, removed the middle room of this front and threw out the window for his new drawing-room, which is a complete example of its date. The date (1774) is conveniently recorded on a stone tablet in the panelled parapet.

The hall is entered by a door in the centre of the north front, and the fine staircase which was on the west side presents a curious problem, as it leads only to a large and small bedroom on the first floor.* Though probably from its dating from the Sir Thomas Twisden the builder's lifetime, it may have been an afterthought when the house was constructed in 1713, and it is significant that some fine staircases were built in Kent about 1719-21, such as that at West Farleigh (a house dated by the rainwater heads as 1719) and Chevening, where a circular self-supporting staircase was put up in 1721 by a Frenchman, Monsieur or Captain De Bois, so that the addition of this staircase at Bradbourne may have been due to local influence. The staircase is of oak, with three pilasters, spirally twisted for part of their length, set upon each tread, and the brackets are carved with a foliated scroll. The soffit of the stair, which follows the curve of the bracket, is moulded and carved with acanthus leaf, the detail of the carving showing no trace of the freer rococo treatment of the middle years of the eighteenth century.

The breakfast-room, which is wainscoted in oak of reddish colour with the usual large panel system of the late seventeenth and early eighteenth century, has cupboard doors contrived in the space between the double doors, the panels forming cupboard doors, a feature very often found in wainscoted rooms of this type. In the sash windows, which retain the original thick sash bars, some of the old bevelled panes still remain. The great hall,

*The same incongruity appeared in the contrast between the stately staircase and landing in the Great House, Leyton, and the rooms on the first floor into which the elaborate doors opened.



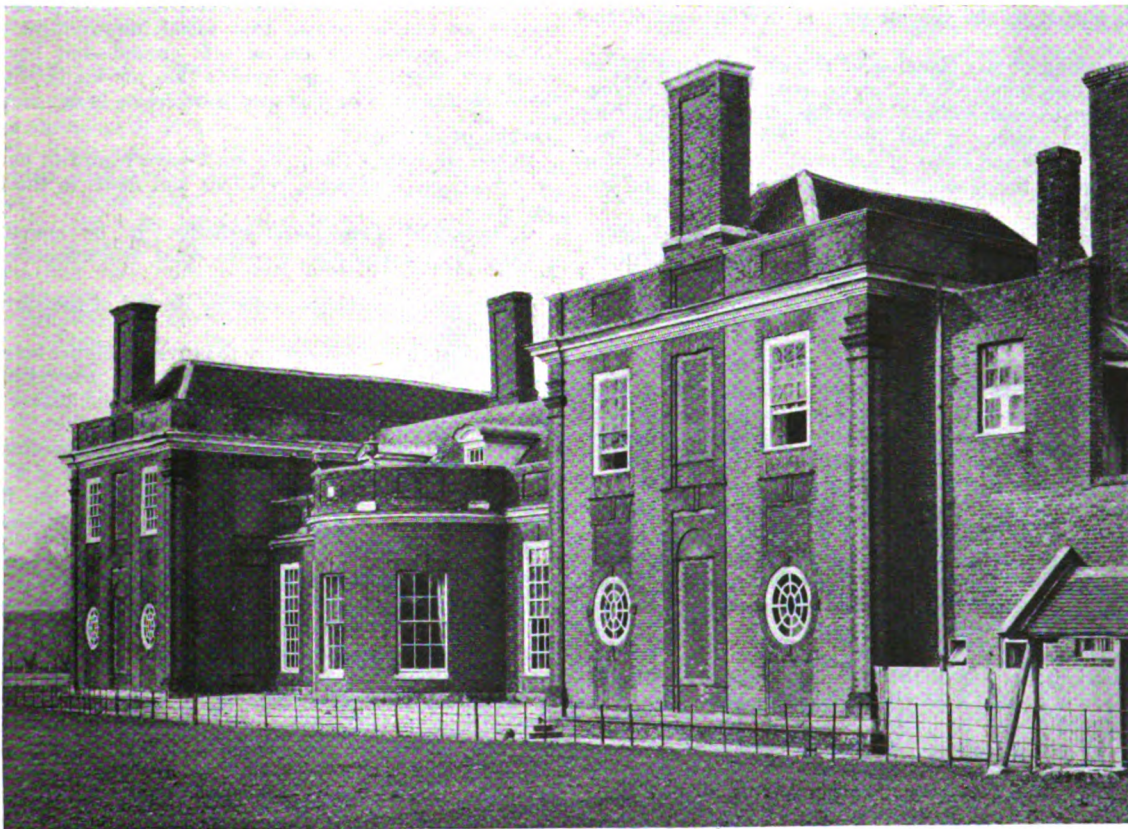
THE BALCONY ROOM.

which is of great height and has a deep cove and flat ceiling, is, unlike the other wainscoted rooms, panelled in deal, painted blue, with gilt enrichments. The long fielded panels above the door rail are enriched with the egg and tongue, and the architraves of the door are also treated with this enrichment on a larger scale. The chimneypiece, which is of grey marble, is of the usual bolection type. The

balcony room on the first floor appears, like the great hall, considerably further advanced than the date of the last year of Queen Anne's reign. The ceiling is divided into panels with a moulded rib, filled either with rosettes or with foliated scroll ornament which surrounds a medallion head. The modillioned cornice, the marble chimneypiece with carved frieze and tablet carved with a rayed head (such as Isaac Ware describes as a universally suitable ornament for this position), the richly decorated pedimented upper structure of the chimneypiece, are characteristic of decoration of early Georgian date; but there is a family tradition that this chimneypiece, together with that of the drawing-room and the room now called the dining-room (but formerly the library), were brought from Italy by John Papillon Twisden, younger brother of the sixth baronet, who set out on his travels at the end of September, 1767.

The chimneypiece of white and green marble and Ionic columns of three-quarter proportion in the drawing-room, decorated in 1774, is, on the other hand, entirely typical late eighteenth-century work in the classical manner; the frieze is inlaid with green marble, and the tablet delicately carved with Diana and her hounds. The ceiling of this room is in the graceful low-relief manner of the period, and the oak door is faced with mahogany on the inner side, while the sash bars of the windows on the large bay are of narrow width. The practice of pulling down the front of the house and throwing out bay windows is referred to by Cauty in his "*Natura, Philosophia et Ars*" as very widely spread at this date, and Crunden speaks of a house with bay windows as making "a great figure in the eyes of the country people and rendering, as they think, the house very cheerful.*" The addition of the bay, while adding to the cheerfulness of the room, is not out of keeping with the sober dignity of the front, and is an instance of the initiative of the late eighteenth-century owner of Bradbourne.

*"*Convenient and Ornamental Architecture*," 1785, p. 6.



THE SOUTH FRONT, BRADBOURNE (1713).

THE CENTRAL BAY (1774).

Town Planning Necessary for Industrial Efficiency.

*Paper prepared for the Manchester Conference (October, 1922)
by Thomas Adams.*

The following is a paper by Mr. Thomas Adams presented before the Conference arranged in connection with the Town Planning Exhibition by the Manchester and District Joint Town Planning Advisory Committee.

TOWN PLANNING SHOULD MEAN PLANNING OF TOWNS.

If we are to make out a *prima facie* case for the claim that is implied in the title to this paper, we must first be prepared to recognise town planning as the planning of towns. To plan a town means that we must have regard to its elements and functions as a social organisation as well as to the composition and character of its physical or structural growth. A town exists because of some industry or industries and the well-being of these must be the primary consideration of its citizens. Therefore, the first problem that confronts the town planner is how to improve the facilities of the town for carrying on its industries and what are the social, economic, and physical improvements needed to make these industries more efficient. An economic and industrial survey should be an essential preliminary to the preparation of the plan of a town. The relation between its constituent parts and functions should be studied and the order of their importance ascertained. Hence a town plan should relate to all forms of growth within and surrounding a town and to the whole of its area, whether built upon or not. In that sense we have hardly begun to plan towns in this country.

Even in the broadest sense in which town planning is viewed by many people it is descriptive of nothing more than a method of planning a few principal roads and streets for purposes of what is vaguely termed convenience, and of securing proper sanitary conditions and amenity for purposes of health; and it is quite a common practice to limit schemes in the main to the planning of one or two main highways and to the restriction of the number of houses to be erected to the acre on comparatively small parcels of land.

It is time to regard towns as places that need to be planned as a whole and not in separate parcels and compartments. Piecemeal planning of parcels of undeveloped land round the central built-upon area of a town may be necessary at certain stages of planning, and for administrative purposes under the Town Planning Act, but the planning of these sectional areas should be related to the general plan of development of the town.

When speaking of site planning or regional planning we, as a rule, mean these things; but when we speak of town planning, most of us seem to mean sectional planning—that is, the planning of undeveloped sections within towns. The only thing that seems to be outside the scope of our town planning legislation and operations is the planning of towns as complete and co-ordinated units.

Much has been said about the defects of municipal boundaries. They have been described as arbitrary and meaningless. May we not ask the question whether the boundaries being chosen for town-planning areas are any more elastic and intelligent?

INCLUSION OF BUILT-UPON LAND IN SCHEMES.

For instance, if it is town planning we are engaged in, why should we not be able to include built-upon land in our schemes for some purposes connected with such land instead of solely for a purpose connected with undeveloped land? Why should we have to go on wasting time preparing "crazy quilts" of maps showing "islands" of built-upon areas simply because we cannot make out a *prima facie* case for their inclusion before we prepare our plans? We can only really know whether the inclusion of the buildings will be necessary when we have fully developed our proposals, and it will usually be found that we cannot effectively and equitably deal with unbuilt-upon land when adjacent built-upon areas are left out. While the increased powers of the Act of 1919 appear to enable us to plan towns, we are still unable to include built-upon land for any purpose connected with such land. Under conditions as they are a solution of the problem is that each town should have a general plan of development prepared for the whole of its area based on an adequate survey and should afterwards select portions of its area to be dealt with under the Town Planning Act. It may then be possible to show the Ministry of Health, as some Councils that have followed this procedure are now endeavouring to show them, that large areas of built-upon land must be included if the general objects of the scheme are to be secured.

At a recent inquiry I gave evidence in favour of the inclusion

of all the buildings in a district having 39,000 population, and satisfied myself that there was a strong case for inclusion under the provisions of the Act. It did not seem to be equitable to restrict the user and density of land likely to be used for building purposes when adjacent land occupied by buildings was not restricted as to change of user and change of density. In all comprehensive schemes some re-planning is probably necessary, but this may be very limited and the main purposes of schemes in relation to built-upon land may be achieved by restrictions imposed to prevent future changes that might take place to the injury of the district and of adjacent property.

A COMPREHENSIVE SCHEME.

At Northampton the whole town and adjacent areas are being planned as one. This general town plan is being prepared so that it may be used as the basis for a town-planning scheme dealing with all undeveloped areas under the Town Planning Act, and of a series of improvement schemes to be carried out gradually over a long period for dealing with built-upon areas by means of local improvement acts. The whole town is being treated as a unit with the addition of a fringe of land outside its boundaries. This is town planning and not sectional planning.

When I think of a town, I think of it as it is: with all its buildings, with its confused mass of factories, shops, and dwellings, with its congestion in the centre, with its changing conditions, its scope for reconstruction, with its need for improvement in the built-upon areas as well as for preventive measures in its undeveloped areas, and, indeed, with all problems of its growth and development as an administrative unit. I think of it particularly as a place in which people live to work, as well as work to live; a place that has derived its being from some sort of industry or group of industries. It is from the surplus wealth, above the level of mere subsistence, derived from these industries that we must look for the resources to give us increased standards of comfort and improved environment.

INDUSTRIES AND GENERAL WELFARE.

In describing industry as the *raison d'être* of the town, I mean industry, as the preserve of the capitalist, but as the joint concern of the capitalist and the labourer. The provision of those facilities that make industry successful may incidentally help the manufacturer, but the goal of achievement is the general prosperity of the community. To preserve natural and promote structural beauty, to secure wholesome housing conditions and to promote public improvements in such matters as the means of communication and recreation, are both a cause and effect of successful industrial development. In so far as we can be certain that social improvement promotes industrial success, we are on safe ground—but beyond that stage our operations must come within the limits of the funds available from the surplus wealth we create in our industries.

ORDER OF STUDIES.

When we plan a town, we must have regard in our studies to conditions, tendencies, relations and needs in the following order:—

1. *Industrial Development*—whether it be manufacturing, distributing, agricultural, governmental, educational or recreational.
2. *Housing Conditions*—including control of the surroundings of dwellings.
3. *Public Services*—necessary to provide facilities for successful industry and wholesome living conditions, comprising transportation by rail and water, means of communication by road, water supply, drainage, recreation, education, etc.

When we place any service such as road communication first, we get the wrong perspective—although no part of a plan can be prepared without simultaneous study of all the factors in town development. I must now confine myself to those matters that relate specially to industrial development.

ATTITUDE OF MANUFACTURERS TO TOWN PLANNING.

I have said that one of the first duties in preparing a plan of a town is to make a survey of its industries and economic conditions. In making and advising regarding surveys of this kind on both sides of the Atlantic, I have found it of importance to ascertain the views of manufacturers and business men. It is interesting to note the different attitudes of leaders of industry, especially as between those in America and England. American manufacturers are thoroughly alive to the value of town planning in promoting industrial efficiency. It was the Commercial Club of Chicago that promoted the plan of Chicago at a cost of £100,000 raised in private subscriptions. One of the greatest chambers of commerce in the world, in the industrial city of Cleveland, devotes a large part of its funds and organisation to town planning. In three American cities that I was engaged in planning last year, the work was begun at the instigation of the chambers of commerce—all largely manned by manu-

facturers. In England the manufacturer up till now has looked with indifference, if not with suspicion, on town planning—whether because of the limited scope of our town-planning operations or because of his lack of appreciation of its advantages I cannot say. At any rate, I find that manufacturers themselves organise the making of a survey into their industries in the States, and here they are prone to question its value and to look somewhat askance at any questions addressed to them, although when the matter is explained to them they show a willingness to assist.

Apart from the desire to improve their towns, which is no greater with them than with our own citizens, manufacturers in the States appear to be interested in town planning from three selfish points of view. They recognise in the first place that the success of their establishment depends nearly as much on external forces outside the factory and under the control of the municipality as on internal forces within the factory that depend on their own executive ability and organisation.

If their works are to be successful it matters a good deal whether a town is planned so as to prevent unnecessary waste of time and money in travelling on the part of their employees, under conditions that destroy as much physical and more nervous energy than is used up during a similar period of actual employment in the factory; it matters a good deal whether it is planned so as to prevent the congestion of streets that increase their costs for cartage and so as to give their workers better homes and means to obtain recreation.

Secondly they recognise that their output depends largely on the skill and physical fitness of their employees. They cannot pay less wages to their workers than other manufacturers because of trade union rules, but they may attract a better and more efficient grade of workers than other competitors, and thereby get the greater output that makes the difference between profits and deficits. It is not so much that well-housed and contented workers produce more than those who are badly housed and discontented—assuming them to be of the same quality at the beginning—as that better housing conditions, good surroundings, and ample recreational facilities attract a higher grade of workers to move to particular localities. It is the one thing that is left to the manufacturer to enable him to compete with advantage with others in the same industry. It is selfish—but in result it works to the advantage of the employees themselves.

A third point is that the manufacturers get on town planning a field of public interest that is less trying to them and more full of opportunity for public service than by serving on public authorities with their thankless task—I speak of America—of trying to serve the public.

SCOPE OF INDUSTRIAL SURVEY.

It is not practicable in this paper to give any details of the character and scope of an economic and industrial survey. One great difficulty in making an industrial and economic survey, as distinguished from what is known as a physical survey, is that of limiting the investigation to essentials for purposes of a plan. You can get too much information as well as too little, and some investigators get together an enormous amount of information, and when collected find it so difficult to digest or tabulate that they are unable to use it.

Some indication of the scope of an investigation may be given by summarising a few points that influence a manufacturer in selecting a factory site, according to the opinion of manufacturers who have been approached in towns in England, Canada and the United States. These are:—

1. Comparatively level sites with good access by road where works can be economically built and good facilities for distribution can be obtained.
2. Low-priced land so that sufficient can be acquired at reasonable cost to permit of the best arrangement of buildings and room for future expansion.
3. Access to railways for certain industries with room and gradients suitable for the most efficient and economical arrangement of sidings; or access to good arterial highways for light industries, dependent on motor haulage for ingoing and outgoing traffic.
4. Availability of tracts of land of varied character to suit different classes of industry.
5. Proximity to gas and electrical works so as to save distribution costs.
6. Facilities to reduce cost of handling and cartage to the utmost extent practicable.
7. Co-operative action by local authorities under expert advice in providing suitable sites and facilities for industries, including the development of modern methods of transportation by water, rail and road, and the necessary terminal arrangements.

8. Proximity or easy access to dwellings, so as to save waste of time and money in travelling of workers to and from works.

9. Supply of skilled labour.

10. Suitable atmospheric conditions.

In one form or another and in varying degree, these matters have a connection with the plan of a town. Our present slap-dash methods of urban growth hamper manufacturers in many directions in trying to obtain the facilities needed to carry on industry efficiently. Much of the fault lies in not having our towns planned as great industrial plants, on which full consideration is given to the needs of industrial development outside as well as within the doors of the factory.

The knowledge of the town planner is limited and he cannot be a specialist in factory location, railway economics and engineering, architecture, land development, and the intricacies of town-planning procedure. He may have particular qualifications in one or other of these directions, but his main qualifications are to know what a town is, to distinguish between its elements and functions, to learn its needs and problems, to bring together and co-ordinate facts and opinions of experts in different fields of knowledge and of business men. He must not be above considering the scope of industrial opportunities and the business and economic principles on which successful town development is based.

In addition to the consideration of the needs of groups of manufacturers in a town, studies have to be made of the opportunities for creating auxiliary industries, for nursing new industries, for obtaining in some cases development of hydro-electric power and of reducing costs of transportation by various means.

ZONING.

In regard to practical methods of planning towns they cannot be divided into industrial, residential and shopping centres on any rough and ready method, or according to any fixed rule. Nor can zoning of towns into industries, business and residence districts, be carried out apart from the general plan dealing with other phases of civic growth. In my own practice I find myself called upon to plan towns that have previously been "zoned" by experts, and the result is that the zoning has practically to be scrapped. Every town has its special needs in regard to segregation of business and residence, industrial development, and topography or structural growth. It has its own customs and its own opportunities. The Town Planning Act emphasises the need for co-operation with owners; it should also provide for co-operation with those who are engaged in and have knowledge of its industries.

GARDEN CITIES.

I have not referred in this paper to Garden Cities, as I am dealing with the planning of existing towns, but whatever difficulties there may be in creating new towns in Lancashire, every existing town can learn much from a study of the principles on which the Letchworth Garden City was founded. It had a definite plan to follow in which proper regard was paid to the facilities needed for manufacture. It provided for the maintenance of a productive belt of agricultural land round the town, and the time is certain to come when towns will not be able to content themselves with ornamental parks and playgrounds, but must have cultivated wedges of park, including large allotment areas, in the interests of their self-preservation.

The process of decentralisation of industry involving the dispersal of certain classes of manufacturing plants from urban into comparatively rural districts, or from large crowded centres into smaller towns which is taking place in some regions, is partly the result of the absence of town planning in the existing centres. It is where this process is going on that it is practicable to create Garden Cities. Where it occurs without planning the new industrial areas thus being created, the movement will be of no lasting benefit to the industries—and the evils that have given rise to it will be repeated in the new areas. In planning a modern town among the problems to be investigated are the causes of any migratory tendency where it exists, and the methods that can be employed to arrest unnecessary movement in future, and to plan properly such new industrial areas as are created.

THE MANCHESTER INDUSTRIAL REGION.

The Manchester region is the most extensive manufacturing region in the world. That is a thing to be proud of. Is it also the healthiest and best equipped industrially? That would be a better thing to say. While it comprises a series of separate towns with Manchester as the centre, it is really one great metropolitan region, in which no part or separate corporate area is without relationship to, and dependent on, the others. Each town in the region may be described as a separate unit in one great industrial plant. It has been a manufacturing centre since the introduction of the Flemish artificers in the

reign of Edward III, but the present Manchester as the capital of the region is a comparatively new city. It is only 85 years since it ceased to be governed by a borough and constables. In the sense that new methods of manufacturing organisation, new ideals of human comfort, and new forms of transportation have come into being in recent years, Manchester to-day is faced with new problems of town planning that make this the appropriate time to plan. There is comparatively even growth in Manchester and in the county boroughs and municipal boroughs and urban districts in Southern Lancashire. The dominant industry of Manchester has become stabilised in the districts where it has developed or grown up, and there does not appear to be much evidence of decentralisation.

The region is one with characteristics of its own. It must develop its own town-planning methods. There are definite relations between the industries, the topography, the system of land tenure, the housing conditions and habits of the people in the region, and varying conditions between different towns that lie within it. In a special degree town planning in the Manchester region must have regard to the special characteristics of its past growth and future tendencies of industrial development and to improving existing towns.

Town planning has of course no connection with efficiency within the factory in any kind of industry. In developing the processes of manufacture, in organisation, and in health conditions, within the manufacturing plant, this region may have made as good or better progress as any other. I doubt, however, if any industrial region has been slower to appreciate the need of making the social organisation that is the complement of manufacturing industry—namely, the average industrial district or town—as well equipped as it should be to do its part in promoting the efficiency of its industries. Perhaps there is no direction in which modern civilisation has failed more than in the crude and wasteful forms of urban development that have followed the growth of manufacturing industry during the past 100 years, both in England and America.

Manchester, as the capital of a region that takes the first place in the production of textiles, engineering, machinery, paper and glass, should take the first place in inaugurating a sane method of town planning—that will have regard to all factors in civic growth—to the peculiar characteristics of the region, and particularly to those that relate to industrial needs and problems. It has acquired its leading place by reason of convenience of situation and development of its transport facilities. It has reached a point where expansion on profitable lines depends on the improvement of these facilities—and the improvement cannot be gained without courageous planning and without the development of improved means of communication by road, sound economic conditions in regard to land development, the establishment of connected park systems and improved housing conditions. Profitable expansion is dependent more on increasing the quality and level of prosperity of the citizen than on increasing its quantity. There is no more evident fact to-day than that a city or region may grow in numbers and yet diminish in the average wealth of its citizens—increase in size and proportionately in the burdens of taxation. Apart from natural forces, Lancashire owes for its success a native energy and inventiveness that should make its people realise that industrial progress depends on maintaining the physical and mental vitality of the citizens.

Dr. Shadwell has said that there is a massive effect about the centre of Manchester which is not equalled by any other provincial city—there are signs of movement, wealth and power in its streets.

It is well that this great centre should recognise its family connections with the group of manufacturing towns that surround it. Speaking of industrial Lancashire, an American has stated that Oldham is the true type, not Manchester. Does this type need a town plan? A commentator describes Oldham as a place with a modest town hall and a wretched and depressing station. But the people of Oldham, if modest of their public buildings, love beauty and appreciate education. They love flowers—grown in the South of France—and they respect themselves enough to have a vigorous and efficient Corporation. But there is ugliness in Oldham that is unnecessary, and enterprise in Oldham that is going to waste because of the need of co-ordinated effect to plan for the future.

My final word is that if any proof is needed of the importance of town planning as an aid to industrial efficiency, it is to be had in this part of the country where a remarkably virile, highly educated and progressive people, entirely dependent for its being and well-being on the successful development of its industries and the efficiency of its means of distribution, is still drifting along in the grip of avoidable evils of congestion, traffic disorganisation, crowded and mean streets, unsightly surroundings to their homes, and the consequent weakening of the whole industrial fabric. There is no place in the world where the

combination of science and practice has been so closely knit in developing its industries, and, yet, where there has been any greater divorce between science and practice in the matter of town development. Individually, there is a passion in this part of the country for those forms of beauty that are not divorced from utility; for a high degree of orderliness and tidiness that is instinctive in its womanhood; for corporate dignity, native patriotism and leadership in industry. If the time arrives when these individual traits can be made a collective passion, then we shall have a new Manchester School—still true to its ideals of personal liberty—but true also to new ideals of public well-being and efficiency in town development, that shall point the way to industrial progress in the future.

Richard Pickering Prize.

The Richard Pickering Prize will be awarded by the Council of the Institution of Municipal and County Engineers at intervals of one year, the funds being provided by the legacy left by the late Richard Pickering (Member of the Institution), Borough Surveyor of Whitehaven.

The Prize (of a total value of fifteen guineas) will consist of Ten Guineas and the Richard Pickering Gold Medal, and is offered for a thesis on a subject selected by the Council of the Institution and announced at the Annual General Meeting.

The subject for the year 1922-23 is:—

“Run-off as affecting the flow in sewers with reference to congestion of buildings, soils, areas, contours, and the effect of impervious surfaces.”

The thesis is to consist of not more than 5,000 words, to be typewritten on foolscap, one side only, and to be illustrated by drawings or sketches.

It must be delivered on or before March 31, 1923, addressed to the Secretary of the Institution of Municipal and County Engineers, 92 Victoria Street, S.W.1.

Sheffield Society of Architects.

In delivering his Presidential address to members of the Sheffield and South Yorkshire Society of Architects at the University, Mr. J. R. Wigfull opened with congratulations to Alderman Fenton on his coming dignity as Lord Mayor, and then dealt with the depression in trade, and its effects on the profession. The costs, unfortunately, remained enormous. Nobody could understand why, but the “money for nothing” feeling was being exploded day by day among the public. The building by-laws remained a hindrance, they remained antiquated; it was very desirable they should be reviewed at least every ten years.

After all, it was not the by-laws so much as the way they were administered which hurt the profession and the builder. The war had been responsible for a great growth of officials and much vexatious interference. Within his own knowledge was a case wherein, on a small job, six inspectors were present, and, when expostulated with, the reply was that, while “Inspector Smith” was there to inspect closet drains, “Inspector Jones” was inspecting the drains from the sinks. It seemed to him that that little fact showed clearly what present-day officialism meant.

Belfast Corporation last week decided to proceed with the first portion of the scheme for the erection of the New Art Gallery in Botanic Gardens Park, at an estimated cost of £80,000. The complete scheme is expected to cost about a quarter of a million. The Corporation is in possession of pictures valued at £200,000 lying hidden away for want of a suitable building to display them. It is anticipated that 80 per cent. of the disbursements for wages in connection with the new building will be available from the Government unemployment grant.

The French Minister of Health has kindly consented to open the Conference arranged by the International Garden Cities and Town Planning Association, to take place in Paris on October 21. One alteration has been made in the programme: a visit will be made to Rheims instead of Chartres. At Rheims the party will be received by the Mayor, visits will be made to parts of the town already re-built, and plans for further reconstruction will be studied on the spot. The tour of Paris to study the historic development of the city and the plans for development on the site of the old walls will be conducted by M. Louis Bonnier, Inspector-General of Technical Services, Architecture and Aesthetics in the Prefecture of the Seine. Plans and other information regarding the places visited will be distributed to the delegates. Applications to join should be sent to the Organising Secretary of the Association, at 3 Gray's Inn Place, W.C.1.

Notes from Portugal.

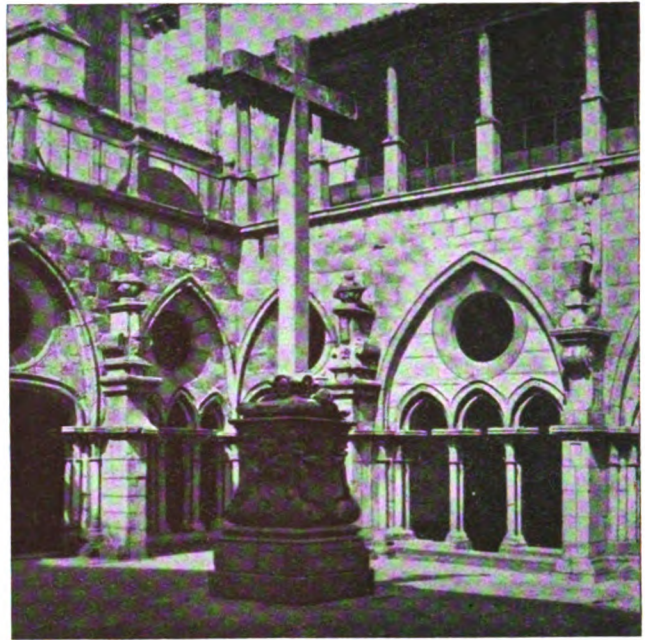
By G. A. T. MIDDLETON.

No. I.—Oporto.

Though Portugal is within as easy reach of England as is Italy—and, indeed, from the Northern counties more easily reached, there being a direct service of fine boats from Liverpool—and at present one of the cheapest countries in Europe in which to live and travel, it has been rarely explored for architectural inspiration. Yet it contains much that is of interest, in the centre especially, where a native style of great elaboration developed in the fifteenth century. In the North the earlier work is Romanesque, and there is a good deal of early Gothic work; but the Moorish occupation, while it prevented Gothic development as we know it in Northern Europe, has itself left little behind it.

There had, however, been an earlier Roman occupation of the country, which left its usual traces, some of them going back as far as to the second century A.D.; and one of the first things seen after landing at Leixões, the modern seaport of Oporto, which lies some two miles up the Douro, is a "Roman" bridge of low semicircular and elliptical arches over a wide and shallow stream. It is picturesque, and enticing to a watercolourist, but of architectural merit it has little, and its Roman origin is doubtful.

The oldest church in Oporto, and probably its oldest building, is the church known as Cedo Feita, or "quickly built." According to tradition it belongs to the end of the sixth century, and its plan at least bears this out, being exactly that of



CLOISTERS, CATHEDRAL OF STA SÉ, OPORTO.



BALCONIED AND TILE-FACED HOUSES, OPORTO.

the earlier Saxon work in our own country, for it has a small rectangular nave without aisles, with a rectangular chancel extending eastwards, which is lighted only from small semicircular windows in the north and south walls, there being no east window. Both nave and chancel are spanned by semicircular transverse arches, those in the nave springing from attached semicircular piers with crudely carved capitals in rough-hewn granite. Whether either had a barrel vault originally, or even if it still exists, cannot now be seen on account of the present thick plastering and poor decoration. The chancel arch is wide and pointed, and probably contemporary with the north doorway, which is precisely such as would be looked for in France of the latter part of the twelfth century, with nook shafts, grotesque capitals, and an arch of several orders, each emphasised by a strong roll moulding at the outer angle.

There is a small cloister on the south side of the same date and French character, perfectly simple and of great beauty, and it is through this cloister that the church is now entered. The bell turret, with its two large bells, is of uncertain date, but the slightly projecting transept, though it harmonises well with the simple general outline, is probably not much more than a hundred years old.

There are other cloisters in Oporto, the most important being those of the cathedral of Sta Sé. French influence is again noticeable, particularly in the strong roll mouldings and general severity, but the tracery consists of nothing

more than one large circle, and the effect is that of extreme dignity. The construction of this large eye is noticeable, and so is the exceptional treatment of the wide openings for the stairs leading up from the cloister walk to the garth.

In comparatively modern times, perhaps two hundred years ago, though probably more recently, a light belvedere of timber, of exquisite proportions and with slender Doric supports, has been added above the cloister walks on south, east and west, and at about the same time a tall granite cross was erected in the centre of the garth. It was a daring thing to do, but the result is not merely picturesque, but perfectly harmonious—an architectural picture of the greatest beauty, yet compounded of apparently incongruous elements. It is worth going a long way to see.

The interior of the cathedral appears at first sight to be wholly Renaissance, but a little investigation shows that the pillars, or at least the lower portions of them, are of the same date as the cloisters; and though the bases tell plainly enough of several centuries of exposure to the weather, there is enough left to show that the section was that of the French water-holding type of the earlier half of the thirteenth century. Granite is not a material which, as a rule, decays rapidly.

The Renaissance decoration, especially of the chancel, has been spoilt by over-gilding, but the choir stalls, less elaborate than the rest, and of oak, have been allowed to blacken with age, and give a welcome relief to the blaze of gold.

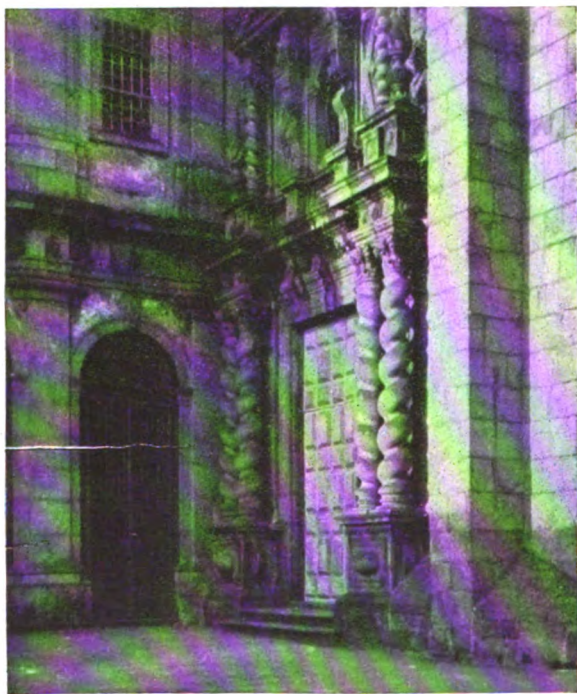
Externally the rococo character of the decoration is more restrained and even a trifle coarse, owing to the difference between oak and granite; but there are at least two features of interest. One of these is a narthex on the north side, reached by flights of balustraded stairs from a steep hillside—a most unusual feature, treated with consummate skill. In contrast to this, the west front is overcrowded with ornament and in a narrow thoroughfare, and the introduction of a glazed oriel over the main doorway, to contain a figure of the Virgin and Child, is entirely unhappy. It confuses the whole composition, which otherwise might have been at least reasonably satisfactory. Were it away, the west wheel window could be seen from below in its beauty; for it belongs to the original Gothic church, and is a fine example of its time. Again, it is almost purely French, such as one would more expect to find in Chartres than in Oporto.



WEST FRONT, CATHEDRAL OF STA SÉ, OPORTO.

Another church which shows the same combination of Gothic origin with Renaissance rebuilding after many centuries of ruin is San Francisco; but here the Renaissance is more exaggerated. It stands on a steep cliff, and is reached by a long flight of steps leading to a platform, from which the church was at one time entered through a Gothic doorway, now walled up and to some extent defaced. The present west doorway is of the richest rococo—that is, the richest possible in granite; but the proportions have at least nobility, which the coupled twisted columns do their best, or worst, to spoil. Fortunately, there is a simply designed entrance to an office building adjoining and at right angles to it, and the whole effect is pleasing.

Internally San Francisco is gorgeous in the extreme. Possibly the French word *magnifique* most accurately describes it. It is covered with wood carving, and the carving



WEST DOOR, CHURCH OF SAN FRANCISCO, OPORTO. 25

has been covered with gold. As to design, if the rococo is the Renaissance gone mad, the interior of San Francisco is the rococo in the padded room! It is said to be the most extreme example in the world, and the description cannot be far from accurate. Perhaps it might have ranked higher if the gilding had been omitted.

Of civil buildings in Oporto there are few which call for study, though the town hall, erected some 70 years ago on the site of the bishop's palace, and close to the cathedral of Sta Sé, stands out commandingly on the top of the granite escarpment up which the town climbs. It is a well-proportioned square mass, regularly fenestrated with great skill. Unfortunately, it does not stand close examination.

The Bolsa, otherwise the Bourse or Exchange, is better, especially internally; one room with imitation Moorish decoration being particularly good.



INTERIOR, CHURCH OF SAN FRANCISCO, OPORTO.

The overhanging balconies of the houses generally are noticeable—sometimes too much so, when they occur on both sides of cobble-paved lanes some eight feet wide and set at a gradient of about one in three. To call these slums is to degrade the word. Anyone attempting to sketch them should be provided with a smell-proof mask.

There are places, however, where the cobble, or pebble, paving is exceedingly well done, in coloured patterns rather after the style of a mosaic. This treatment is quite common on the sidewalks, and is a suggestion worth adopting for garden paths, especially near the sea where coloured pebbles are easily obtainable.

Another common use of colour is in wall tiles, used externally, both in old and modern work. The prevailing colour is blue, and the effect is occasionally pleasing when the design is restrained and geometrical in character; but when, as sometimes happens, it takes the form of pictures carried over a frontage regardless of doors, windows and architectural features, there is little to be said in its favour.

At a special meeting, the Burton-on-Trent Town Council have passed a scheme for the widening of the Trent Bridge so as to provide for four lines of traffic, the doubling of the tramway tracks, and two wider footpaths, at a cost of £71,680. Mr. T. G. Lynam (the engineer) put the cost of widening and of doubling the tram track at £57,000, and that of continuing Bearwood Hill Road (thus obviating a dangerous corner), and additional cost of tramways, at £11,000, making the total cost £68,980. To replace the present steel bridge over the Hay branch of the Midland Railway at the western end, £2,700 will have to be added.

THE ARCHITECT, OCTOBER 13th, 1922.



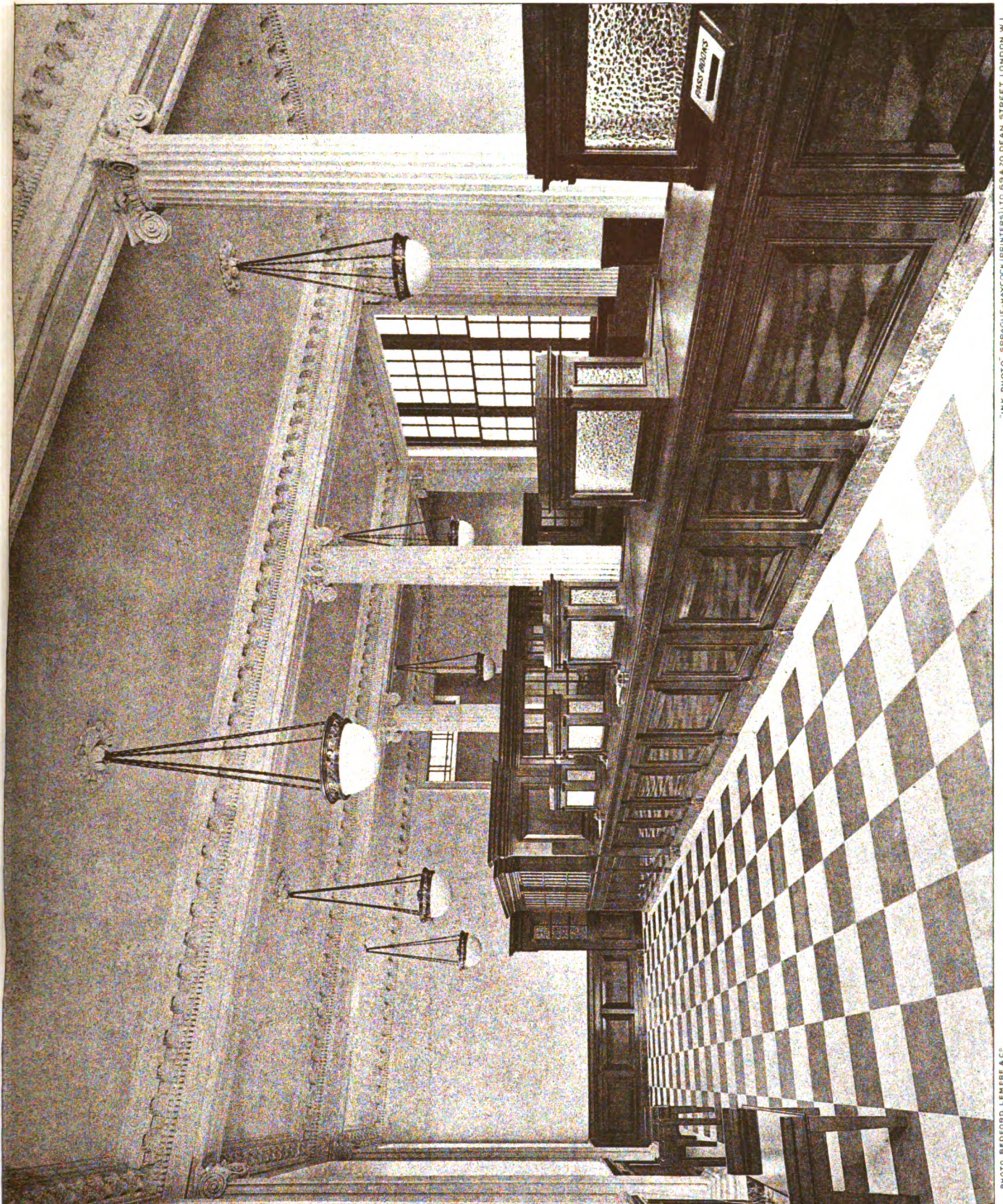
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DETAIL OF EXTERIOR.

BANK PREMISES AND FLATS FOR THE LONDON COUNTY, WESTMINSTER & PARR'S BANK, LTD.

EDMUND WIMPERIS & SIMPSON, ARCHITECTS.



INTERIOR VIEW OF BANK.

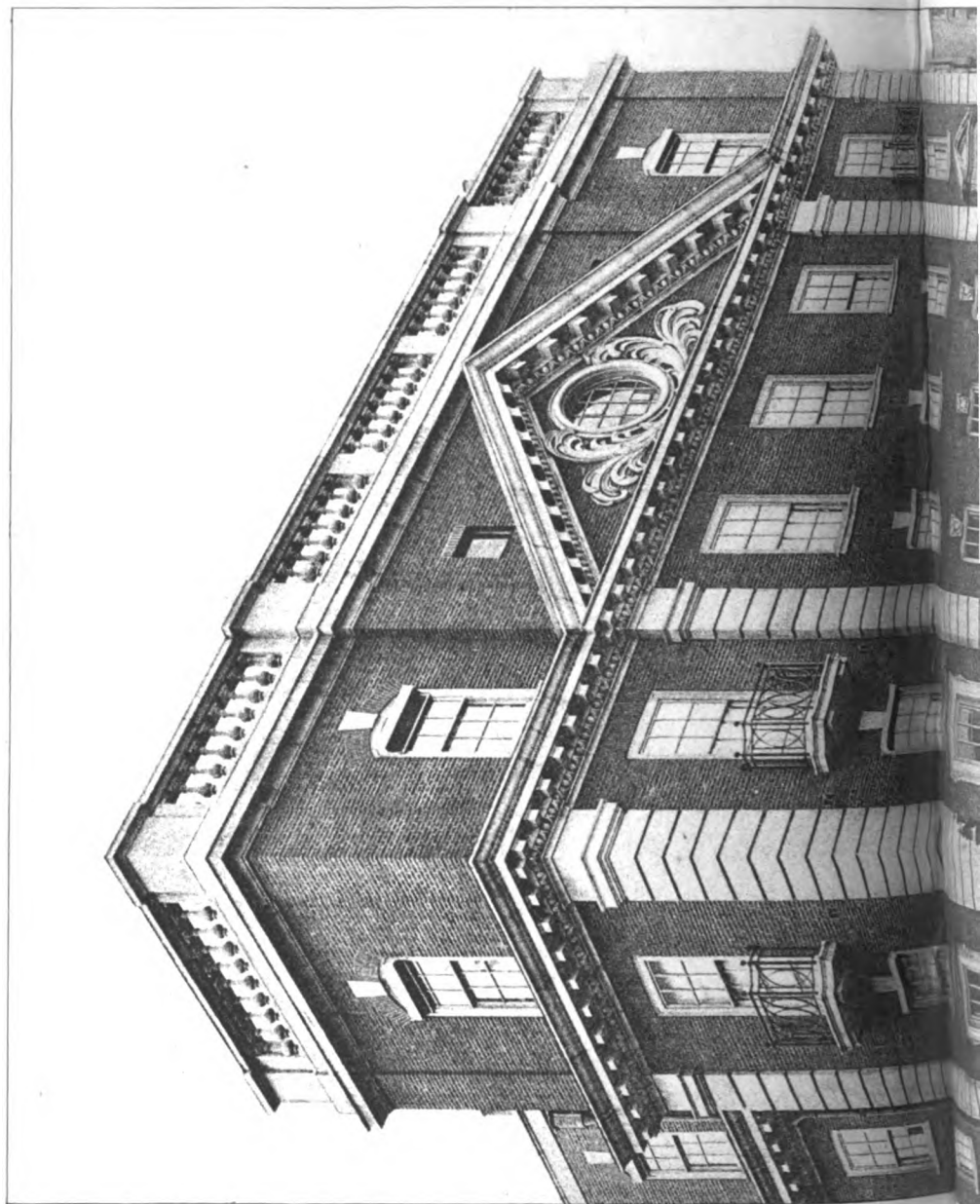
BANK PREMISES AND FLATS FOR THE LONDON COUNTY, WESTMINSTER & PARR'S BANK, LTD.

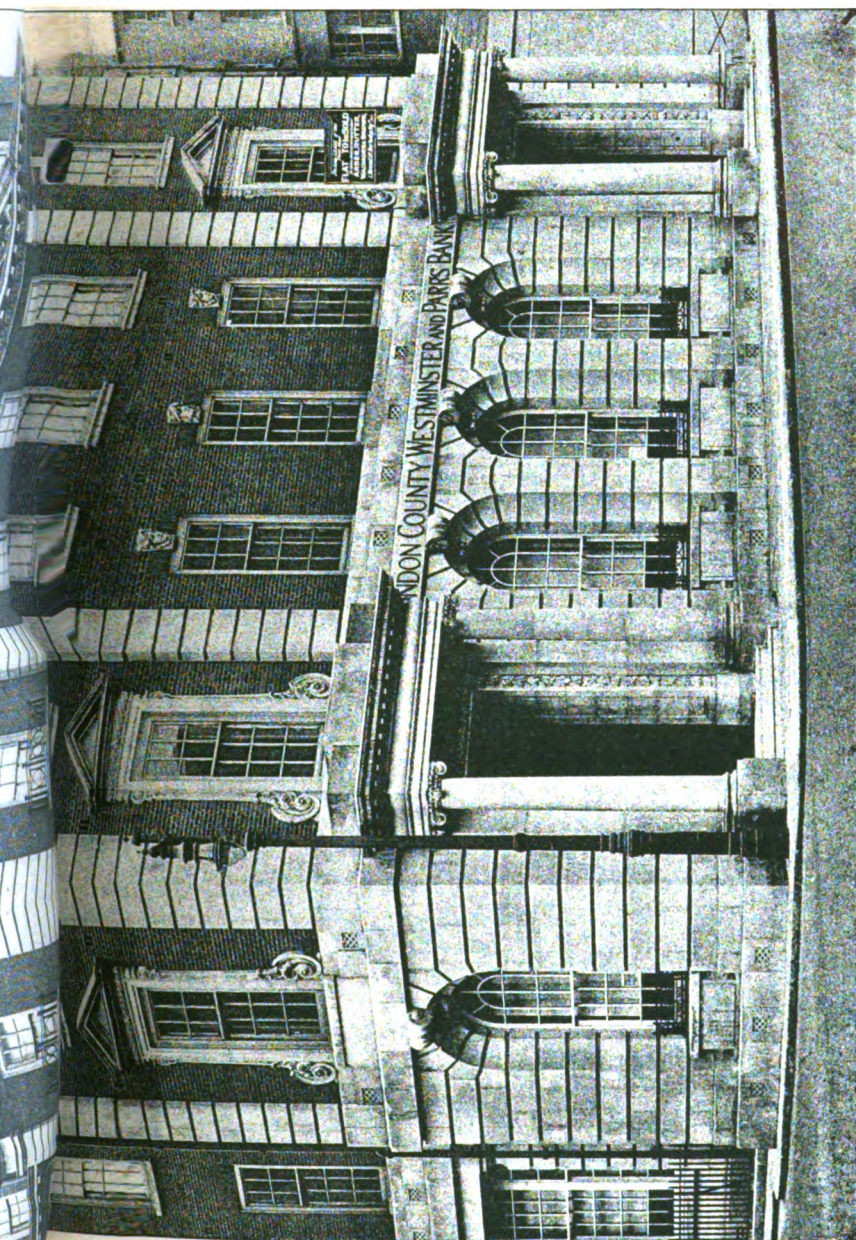
EDMUND WIMPERIS & SIMPSON, ARCHITECTS.

INK PHOTO. SPRAGUE-HAYCOCK (PRINTERS) LTD 69 & 70 DEAN STREET, LONDON, W.1

PHOTO BEDFORD LEMERE & CO

THE ARCHITECT, OCTOBER 13th, 1922.





"INK PHOTO." SPRAGUE-HAYCOCK (PRINTERS), LTD. 69 & 70, DEAN STREET, LONDON, W.1.

MAYFAIR HOUSE, CARLOS PLACE, GROSVENOR SQUARE, LONDON, W.
 BANK PREMISES AND FLATS FOR THE LONDON COUNTY, WESTMINSTER & PARR'S BANK, LTD.
 EDMUND WIMPERIS & SIMPSON, ARCHITECTS.

[illegible]

The Poster is Related to Civic Design and Takes its Part in Street Decoration.

By Amelia Defries.

"Art is very rarely divorced from Industry. Even before he fashions implements for use in peace or war, or before he proceeds to decorate them with lines or images, the artist selects from among the innumerable objects about him, giving preference to those objects which in their shape satisfy his sense of harmony and beauty, be it through the eye or his sense of touch. But when he comes to the fashioning itself, though the object of use may of itself lead to the production of pleasing form, at the very earliest stage he begins to decorate it, and this act of decoration is immediately meant to satisfy the æsthetic instinct."—SIR CHARLES WALDSTEIN (Cantor Lectures, Royal Society of Arts: "The Relation of Art to Industry.")

I.

How can I say when the first poster was designed? Who first put out a sign to advertise his wares? Nobody knows. But it is sure that in the remotest times man has had artistic means of calling attention to what he wanted to make public. You may ask how I know that he had artistic means—the answer is in the above quotation by a great authority, and also in the well known fact that, until comparatively recent times, nothing inartistic was ever made because no one ever thought of making bad designs or ugly colour. It was not done.

Sign painting was well advanced in mediæval times, and in the last century no less a person than Turner painted signs—for a wheelwright—in his early professional life. Since then many great artists have designed posters. Aubrey Beardsley, Toulouse-Lautrec, Manet, Phil May (of "Punch"), Sir Hubert von Herkomer, Commandatore Walter Crane, are among the masters of the poster art, but the real impulse was given to the art by the "Beggartaff Brothers" in England, after which it was developed very splendidly in Germany. At the Ghent International Exhibition in 1913 the Germans showed the best posters, but many beautiful ones were made in France and in Italy—though perhaps no country has made the equal of the Japanese theatrical ones.

Some interesting notes on this new art were recently sent to me by McKnight Kauffer, an American artist and a member of the Faculty of Arts Council, who, like Whistler and Sargent, has found his opening in life in England.

These are his notes:—

"At the present moment the poster in England is just approaching the standard that has already existed for some years on the Continent. Considering that years ago men like the Beggartaff Brothers, and Beardsley struck a new note in poster art, one wonders why this seed did not flourish in its native soil. 'Don Quixote,' 'Hamlet,' and many more posters found their way to the Continent and were appreciated by the commercial eye and readily adapted. Simultaneously there was a similar note struck by two Americans—Will Bradley and Edward Penfield. Briefly, these men, together with Lautrec, Cheret, Ibels, Daumier, Steinlen (in France), were responsible for the development of the poster as it stands to-day in all countries.

"Germany, with its commercial propensities, has made the most of every new idea that has come into the poster-world, and has, one might say, brought suggestions given by the men already mentioned, to their logical conclusion. Or, to put it more clearly, they have formed an Academism in poster-designing which, although striking and in many cases admirably suited for the purpose, lacks that free, sensitive force which distinguishes the work of Toulouse Lautrec and the Beggartaff Brothers.

"The value of the Poster as a medium of art education has not yet been fully recognised, even by the artist. The connoisseur who buys what are called easel pictures because he understands and cares for them is a very rare person indeed; the picture-loving public forms, at its widest, a very small circle to really appreciate good pictures one must come into contact with them constantly. The number of people who attend exhibitions is still exceedingly small. National galleries are usually huge institutions, and the habit of visiting them has not yet been acquired by the general public. The hoardings stare everybody in the face, and if the artists would make it their duty and pleasure to remove eye-sores which so often fill the available space in a street, and fill these spaces with 'art food,' the result would be a steady widening of the circle of art-lovers.

"ONE OF THE GREATEST DIFFICULTIES WHICH THE ARTIST HAS TO DEAL WITH IS THE LACK OF CONFIDENCE WHICH IS SHOWN HIM BY THE ADVERTISER. THE BUSINESS MAN GOES TO ANY OTHER RECOGNISED SPECIALIST, SUCH AS HIS DOCTOR OR HIS LAWYER, AND REALISES THAT THE SPECIALIST HAS DEVOTED HIS LIFE TO A PARTICULAR STUDY AND THEREFORE KNOWS MORE ABOUT THAT SUBJECT THAN THE BUSINESS MAN CAN KNOW.

"Not so does he treat the artist. Is it because the business man, in whose life art usually has so small a place, does not recognise that an artist has at least the average intelligence and is certainly a specialist, as much as is the doctor or the lawyer,

and thus he uses up his valuable time in advising the artist how best to do his job? I should like to put another question to the business man: Does business help to develop the conservative type of mind? So often the advertiser gets used to a certain type of poster and forgets that when the public gets used to a certain type of poster, it ceases to be attracted by it, then the poster has failed absolutely in its purpose. Yet when the artist recognises that state of affairs and produces something new, something that will force the public to look, the advertiser says, 'I can't understand that; it's too advanced for me, I'm afraid.'

His last point, that the public needs to be jogged by something new, is right in one way and wrong in another. I think that if a firm gets hold of a remarkable poster of a certain object for sale, and uses this insistently, for years on end—the public, whenever it sees this poster, will connect it with the object advertised. Pears' Soap struck a new note when it purchased an Academy picture and used it as a poster: "Bubbles," by Sir John Millais, was never a good picture and never a good poster, although it originally cost a thousand pounds, but, nevertheless, the firm still uses it, and "Bubbles" has become synonymous with Pears' Soap. *If a firm will pay a large sum for a design and use it for many years, it is better for the artist than if the same firm is constantly demanding new designs to advertise the same object—and it is better for the firm's pocket, in the end—also it tends to raise the standard of the poster-art.* The artist's desire to be constantly making new designs will find its outlet in the number of commissions from different firms that he can obtain, but instead of a lot of poorly paid and necessarily more or less meretricious work, such as he is now called upon to do, he can, if paid a high price for a design intended to last, take a long time on one poster and make it really a work of art; he can, later, sell the original to a museum or collector, *for he should make a stand and only sell the advertising rights and never the actual work to the advertiser* (unless the latter is also an art collector, when he should buy the picture, as he would buy any other object, for his collection). The poster-artist to-day, even when as good an artist as Mr. Kauffer himself, has to turn out more designs at a cheap rate and quickly, than is consistent with uniformly fine work.

There should be a Royalty law for the poster-artists' benefit, because the usual method of sale to-day is against him; the advertiser pays him for his design and then has absolute rights over the original and can use it in any way he likes—he can reduce it and put it on his note-paper, on his boxes, and so on, and he can even have it carved or cut out and sold as a toy or what he will. This is so wrong that any artist permitting his work to go so cheaply ought to be looked upon as a professional blackleg! Yet what is the poor artist to do, as the law stands to-day? He has to get his artistic education and practice, after which he must embark on a long and bitter struggle with the man of business: his time must be partly spent in running about from one man's office to another, like a common journeyman—altering his designs or making new ones *to please a man who never really knows what he wants and rarely wants what the artist brings him at first, even when the work has been done on commission*—will take up a lot more time. He then has to oversee the printing work, or to make the lithograph himself—and when all this has been done and his design is on the hoardings, it stays up for a few weeks or months and is no further use, as a rule. He gets out of the transaction less than he can get by the sale of an oil painting, which he has only had to send to an exhibition or to a dealer. The rate at which he is now expected to work tends towards mechanical designing; and it stereotypes him, inevitably, belong long. There now exists in the Faculty of Arts Commercial Group, which hopes to prove that *the day will come when men of business will feel a pride in leaving to the nation those works of art which have been made for the advertising of their goods!*

It would be a help if the newspapers would make a point of publishing critiques of the new posters as they appear on the hoardings, or if they would get advertisers to send them every new poster for criticism, as books are sent by publishers now.

It would be a good thing, too, if more thought could be given to the hanging of the posters, for, as hung now, many a good piece of work has to jostle its way through such a crowd of rubbish that the æsthetic pleasure of the former is lost on the audience. *The hoardings should be thought of as the established picture galleries of the masses, and poster designing should be considered a civic art.*

A poster, of course, need not have any design at all, but may consist only of lettering, and in this form it can still be fit for a museum, because it gives the printer a chance to use his particular art, and for this reason a great many posters are included in an exhibition of printing which the Design and Industries Association has been sending around Britain. The craft of the printer has reached, in England, thanks to William Morris, a higher standard than anywhere else. At the same time, the

British have not been able to get the better of the Germans or the Japanese in the matter of cheap colour printing, though in art lithography they are on a very high level indeed. The Design and Industries Association, in an able article published in its magazine, says that the best model for lettering is found in the old inscriptions of 2,000 years ago. One may remark here that a great expert on lettering designed an alphabet which he could not get into general use in England, but a German type-founder got hold of it, and the designer lived to see the spectacle of British firms buying type from Germany which he—an Englishman—had designed and could not get taken up in his own country!

This is possibly due to what Mr. Kauffer would call the conservatism of the British business man! Such things became a national scandal, and even now they continue.

The art of typography is one every poster artist must study in all its aspects; but so far few seem to realise this: and one must not pass over the humiliating fact that the Government has been showing on the bill-boards, to advertise its Old Age Pensions, a shocking reproduction of the portrait by Whistler of his mother, which belongs to the Luxembourg, and has added insult to injury by actually printing over the background, in the most vulgar white lettering, words which completely ruin the artist's composition. That this should have been done to a work by Whistler (who took such trouble even about the placing and designing of his signature on a picture), and done by the British Government, only shows, once again, what a land of paradox this is—for if any artist had been asked to advise, the necessary words might have been beautifully designed and properly placed, and the colour values might also have been right—if it was finally considered vital to take such a liberty as to use the picture at all.

"Printers," says Harold Curwen, "have a great responsibility in that with equal facility their presses can turn out well-designed things which are a pleasure both to the workers who make them and to all who use or see them, and shoddy, badly-designed things which do not fulfil their purpose well and degrade everyone who makes or uses them." Manufacturers and advertisers have a great responsibility too, for they can, with equal ease, patronise shoddy work or work which will make a healthy impression upon everybody. Credit is due to W. H. Smith, to the Underground Railway and to Messrs. Derry & Toms (to name a few leading firms) for the excellent example they have given in this respect. An example, too, of what lettering should be can be seen in a building in Bond Street, which the Royal Irish Industries Association has put up, designed by M. J. Dawson, who is a member of the Arts & Crafts Association of Great Britain.

In a paper read some time ago before the Royal Society of Arts, London, on the modern poster, by W. S. Rogers, the lecturer remarked that there are still too few British artists who will draw their design direct on to the stone for lithographic purposes, and that so long as this continues, the art of the poster will be retarded, yet the use of lithography has reduced the cost of production, and should not be abused by being turned over to the man who has not drawn the original design. Mr. Rogers noted that in 1894 the poster was not known in Germany or in Italy, yet Germany got ahead of us all because of its fine lithography, and although the Senefelder Club of England has filled the gap, too few business men employ its members to make posters, and too few poster-artists are members. One of our printer-members, however, invites the artists to draw on the stone for him.

The poster is essentially an art of ideas, but it should also be possible to develop it technically as well to a degree of fine art that has not yet been reached.

Generally speaking, British posters have, said Mr. Rogers, few faults in lettering, except that of excess of quantity. Few advertisers to-day insist on letters interfering with the design (they leave that to the Old Age Pensions Department of the Government), but it is still no uncommon thing for a good design to be ruined by the printer, and this through no fault of his, perhaps, but merely because the advertiser will not leave the whole thing to the artist to see through its final stages, but orders from the printer without understanding the printer's art. On the other hand, too few artists have made a study of this technique.

What, asked Mr. Rogers, is the use in buying a good design and then, for the sake of a few pounds on the printer's bill, having it ruined? Obviously one of two things must happen: If the poster is to reach the fulfilment of its promise as a national and democratic art, either the advertiser must be educated to treat the artist as he would treat his doctor, and place entire confidence in him to carry the work through—and pay him properly for so doing—or else every business man with goods to advertise by means of the poster must take a course in arts

and crafts and learn the elements of lithography and printing, as well as of designing, so that he may not be—as at present—like the housekeeper who ordered her cook to make a Christmas pudding for lunch when only two of the ingredients were in the larder half an hour before the mealtime when the order was given.

It will, by now, be readily seen that the subject of posters is by no means as simple as it sounds, and there is no space or time here to enlarge upon the psychological side of this new art, which yet is old; obviously it is a subject upon which a lifetime of study may be spent, and it is a line of work yet in its infancy, which any country may take pride in developing. The art of the electric-sign is still more subtle and undeveloped, but when one thinks of the colour-harmonies which may thus be obtained, one realises all at once that the blatant confusion of Piccadilly Circus or of Broadway is not really good advertising.

Much may indeed be learnt by the advertiser and the poster artist through a sincere study of the old signs which may still be seen in villages in England; usually to-day they hang outside the public drinking houses, but they have psychological significance. You might not think that a portrait of a greyhound, or of hare and hounds, or of a king's head, or any such subject, would attract people to go in and drink, would you? Yet this is how the pictures run on these signs—that is why, doubtless, a wheelwright could employ Turner—for you may be sure that he did not insist on this artist drawing wheels all the time, but probably let him paint landscapes to his heart's content on the boards needed to attract people to the shops for which he painted them. A great fault to-day is that advertisers stupidly insist on picturing with mistaken effort towards accuracy, the object for sale, with wording also deadening in effect, concerning it. Let these people take a lesson from the old-time signs.

One thinks to-day of a poster in terms of colour, but as a matter of fact much remains to be done with black-and-white on the hoardings; the kind of black-and-white work which would be suitable is not that of the illustrator or the etcher, but is of a different type altogether, and is concerned chiefly with pure design. Even Beardsley was too finicky for his black-and-white posters to really succeed, but one or two French artists have succeeded in this line of work. One can imagine that an artist with Cézanne's sense of form could make a black-and-white poster such as I have in mind. It is a great mistake to imagine that anyone who can draw, paint, or design well is, therefore, a poster artist; by no means—he who devotes his life to the hoardings and makes works of art, for advertising purposes, which will stand the test of time, must be indeed a rare type with a gift for this particular kind of thing.

Who are the best artists of this sort in England to-day? Possibly they are at present unknown and unemployed.

There is another side of the question that I will touch upon. How is the advertiser to get in touch with the artist he would employ? Is the artist to continue running about from office to office like a seller of tin-tacks, with his wares?

And if not, what then? The Faculty of Arts is solving this problem. Here the true art-critic comes in; it is his business to keep his eyes and his mind open; he may specialise on art suitable for advertisers and keep a list of suitable artists—of those who want work and of those who, by reason of examples seen by him in the exhibitions he has to visit, seem to him cut out for this sort of work. To him the business man should turn, and should either pay him a retaining fee to keep him *au fait* with the times and the artists, or should send for him when necessary and take his advice, paying him as he would pay any other specialist he chose to consult. Consultant-critics could then ply a profession as do consultant-engineers. There are art associations which keep list of artists willing to do this type of work, but they savour too much of the employment bureau, and selection is left to the secretary, who usually sits in an office taking down names and addresses and replying to applications; (could anyone be less suitable to advise a busy business man?) It is the job of the art-critic, who should stand or fall by the artists he recommends.

When in Washington in 1920, I presented a small collection of British Commercial posters to the Library of Congress, and I was then invited to send a similar selection to the American Federation of Arts, by whom this series was circulated in over 200 places for over two years. It was generally agreed that this collection set a standard for America. The Faculty of Arts was next invited to arrange an exhibition—October, 1922—of original works for Messrs. Willings & Co., in London, and the Federation of French artists has invited a similar show to Paris in 1923.

Among the leading young artists in these exhibitions was Nancy Smith, founder of the commercial art group of the Faculty of Arts.

Her work has been picked out for praise by a leading Paris art critic, who is publishing a monograph on her work. The



WOOD PRESERVING STAIN

Solignum simply applied cold to UNPAINTED wood penetrates the fibrous cells, destroying and preventing the development of destructive germs. It is a certain preventive of dry rot. Solignum imparts a rich stain to the wood, emphasising its natural grain, with colours soft and pleasing.

It is permanently decorative and preservative; cheaper than paint; lasts longer and costs less to renew.

Use EXTERIOR Solignum for doors and gables, fences, gates, poultry houses (as a preventive of red mite), and outbuildings. Use INTERIOR Solignum for all interior woodwork.

It is the Ideal floor stain as it does not rub off, show scratches, or wear bare; and can be varnished, wax polished, or cedar mopped.

Please write for colour sheet of its 13 colours (Browns, Reds, Greens, Yellow, and Blue), London Depot, 205 High Street, Southwark, London, S.E.1., mentioning "The Architect."

MAJOR & COMPANY LTD

Underground Railways of London have done pioneer work in employing and discovering the chief young artists who have made their fame in this sort of work.

II.

At my request, Nancy Smith has collected an exhibition of reproductions of all her best work up to date, especially for the Village Clubs Association. Miss Smith trained as a kindergarten teacher, and in her teaching she found the need of simple wall pictures to illustrate courses in history, geography and so on. Pictures to stimulate the imagination rather than to satisfy it, therefore such illustrations did not need much detail, but had to present the subject directly.

She boldly started out to find such things, but nothing of the sort existed. She saw many publishers, and tried to convince them of the need; but in vain, the publishers only quoted the financial failure of any past efforts in this direction. Nancy Smith was, however, certain that she knew the reason of this failure—viz., too much detail and too high a price.

She had at last to give up the idea for a time, and then, not to be suppressed, she made a new attempt. She got well-known teachers and educationists to give their opinions, and by interviewing the heads of colleges and schools, she obtained their support. Then she determined to try publishers again, and made her way to different ones. Out of all those she saw, only Messrs. George G. Harrap & Co. grasped her point. They said, "Go ahead!" She showed them rough drawings of what she wanted, but not being a trained artist, it never occurred to her that she could produce the necessary designs. She had only drawn rough sketches to help out her own teaching in her classes.

Messrs. Harrap, nevertheless, were enterprising enough to commission Miss Smith to do the work herself.

To keep down the cost, very few colours could be used, and this needs expert experience as a rule for good results.

This pioneer girl then joined a figure-drawing evening class, and shortly she gave up her school post and took the big risk of beginning an artistic career. To help her in this struggle, she took a morning post for teaching, and went to Hassall's studio in Earl's Court in the afternoons for three months. She was incessantly making sketches of people in the tubes, etc., as she went about, and she studied anatomy by night at home. After a time she found it better to have her own models in her rooms and to take the work in batches to her teachers for their criticism.

John Hassall, an adviser now of the Faculty of Arts, helped her tremendously, as he was so very practical. Dudley Hardy also thought a lot of her capacity, and helped her too.

And so she completed her first commission to the satisfaction of the publishers, who gave her her first start as an artist. Then she obtained work as a book illustrator, and this meant a lot of Museum research. Afterwards there came a further commission from Messrs. Harrap, who now were able to allow her to use more colours, as the first set she had done for them promised so to be a financial success.

She then exhibited some decorative panels which attracted the attention of the Underground Railway connoisseurs—and so she began her poster work with which she leapt into fame.

The war made further enterprise in regard to educational pictures impossible, but this is now beginning again.

Already she is known as a leading artist in a new field—in Paris, America and London, and her best work is still before her, as she is young. She has the instinct for the real thing and the capacity for deep study; she knows exactly what will print well and she has a fine sense of colour-values, as well as a talent for design. Her love of the country and her delicate, gay temperament are typical of the best features of the English character. Her career will be watched by all discerning lovers of art with great interest, and her present exhibition will delight and inspire her audiences. When it has finished the tour of the village clubs, it will go to Paris and to America. These and similar exhibitions will educate people to see the poster in the light of a civic art.

New Books.

"The Roadmender Country." By Lorma Leigh. The Homeland Association. 7s. 6d. net.

All those who have lost their hearts to Sussex, as well as the many lovers of Michael Fairless, should welcome these "few wandering thoughts" of Miss Lorma Leigh, who thus modestly describes her little book on that corner of the county she styles "the Roadmender Country." I like her sympathetic picture of the valiant writer she honours in these pages, lying suffering in the old-world garden of Mock Bridge House at Shermanbury, gazing across stream at the white gate silhouetted against the belt of dark trees—the gate that may well have been symbolic of her ultimate release. Miss Leigh tells quaintly how she

learnt from a neighbouring squire why most of the gates thereabouts were painted white—he "liked to see his jumps plain before him."

There are many other pleasant pictures of the little Sussex villages, with their mellowed gabled houses with irregular, tall chimneys; of the old English churches—I take at random St. Giles, Shermanbury, and St. Andrew's, Steyning, said to be on the site of an old wooden eighth-century church built by St. Cuthman, the shepherd, of whom tradition says he ordered his sheep, in the name of the Lord, not to stray beyond the encircling line drawn by his crook. Then Cowfold, with its monastery of St. Hugh of the cream-habited Carthusians, dedicated to that saintly Bishop of Lincoln who so loved birds, great and small, and was loved and trusted by them, that his symbol to this day remains the swan. And Bramber, with its charming half-timbered house with flagged courtyard and Elizabethan fan garden, and museum, whose proprietor is not only a keen naturalist but a bit of a wag, it would seem, as one may read: "Admission by payment of twopenny. Children, one penny. Ladies and Gentlemen, their own generosity"!

Through these chapters there runs, also, a keen love of the open country in fair weather and foul; of the vigour and lasting appeal of the Downs; of the play of sunlight and shadow on the face of the earth; of colour, contrast and harmony—and the authoress so reverences her subject that we can forgive her occasional wide digressions to "sound" memories of Westminster Cathedral or other alien topics.

Mr. Duncan Moul has made some careful pen studies for the text, of which I like best that of Shermanbury Mill, which played so brave a part in the feeding of the county in the lean times following the Napoleonic wars, and the charming drawing of St. Mary's, Bramber.

W. H.

"Goya as Portrait Painter." By Aureliano de Beruete y Moret. Edited and translated from the Spanish by Selwyn Brinton, M.A. Constable & Co., Ltd., London, Bombay, Sydney. 1922. Price 52s. 6d. net.

The present volume formed in the Spanish original, the first of a series of three volumes dealing with the entire art creation of the Spanish master, Francisco Goya, the two later volumes being devoted to his decorative art and to his wonderful series of engravings. The volume now translated by Mr. Selwyn Brinton confines itself to the portrait art exclusively of the great Spaniard; but the portraiture of Goya, the Court painter of the Spain of Charles IV, is perhaps the most important side of his art, and the one which finds most appreciation in our own time, both here and in America.

Goya's artistic career, on this side especially, was one of constant evolution. He advances from the somewhat conventional treatment of his portrait of his earlier patron, the Conde de Floridablanca, to the superb creations, still unequalled in their kind of his "grey" period, the Francisco Bayeu, and the portrait of his son, the famous "L'homme Gris"; then to the rich and brilliant colouring of his later period in "The Family of Charles IV," and the masterly full-length portraits of Spanish noblemen, such as the "Marqués de San Adrián," or the Conde de Fernán Núñez; and of beautiful women of the Court, one of the most corrupt of any time, such as the refined and elegant Duquesa de Alba, the queenly Marquesa de Lazán (both of whom visited London in the recent Spanish exhibition at Burlington House), the beautiful Dona Antonia Zárate, of the dainty little Condesa de Naro, who look as alive, as modern as if they had just entered a twentieth-century salon. This gift of life is one of Goya's most striking characteristics; yet he had based himself, as Señor de Beruete shows, on the earlier Spanish art, to some extent on Greco, certainly and very fully on Velasquez, and thus produced an art which remains intensely national.

But yet again in his latest paintings—and he went on working till he died at Bayonne at the age of 82—he becomes already a pioneer of the future; and Mr. Selwyn Brinton in his two pages of preface has been careful, like the Spanish author, to draw attention to this fact. "He comes before us in this volume as the direct ancestor of all that is most real, most alive in the manifestations of modern art. His deft fingers, guided by the instinct of genius caught up the torch of the past, perpetuated the tradition of Greco and Velasquez. This tradition was in his later work to be the inspiration of a new movement which arose in Paris from 1860 onwards, and with which the names of Monet, Degas, Cézanne, above all of Manet, are intimately and indissolubly connected."

The volume is satisfactory in type and "format," and the fifty-two collotype illustrations form an admirable gallery of Goya portraits; the translation, while closely following the original, is clear and attractive, and it is only to be regretted that the late Director of the historic Prado collection, of which Goya's art is such a feature, was not spared to see his work worthily produced in English.



AUSTRALIA HOUSE.
A. Marshall Mackenzie & Son, F.F.R.I.B.A.
Architects.

From an original Etching by
Christopher M. Shiner.

REDPATH BROWN & CO. Ltd.

CONSTRUCTIONAL ENGINEERS,

3 LAURENCE POUNTNEY HILL, E.C.4

WORKS AND STOCKYARDS

LONDON
Riverside Works,
East Greenwich, S.E.

MANCHESTER
Trafford Park.

EDINBURGH
St. Andrew
Steel Works.

GLASGOW
Westburn, Newton.
Office: 19 Waterloo St

BIRMINGHAM
Office:
47 Temple Row.

NEWCASTLE-ON-TYNE
Office:
Milburn House.

REGISTERED OFFICES: 2 St. Andrew Square, EDINBURGH.

Garden Cities and Satellite Towns.*

By EBENEZER HOWARD.

In 1898 I published "To-morrow—a peaceful path to real reform," afterwards re-published as "Garden Cities of To-morrow."

The primary object of that book was to show how the twin evils of the overcrowded city and the depopulated countryside—evils long recognised and universally deplored—could be gradually dealt with and at length entirely removed by a bold, yet extremely simple and practical policy of reconstruction, which could be started upon in the first instance by a small section of the community. The plan suggested was the building of an entirely new and well-planned town—industrial, residential, and agricultural—a town which, as it developed would combine more and more fully the advantages of town and country life, and would, like a magnet, draw the people towards it. And I suggested that this work should be started upon without waiting for Governmental aid, as one knows how seldom can the State be induced to support any measure, however obviously practical and valuable, until much pioneer work has been successfully accomplished and a demand for national action on a large scale created.

The following definition of a Garden City was recently framed by the Garden Cities and Town Planning Association—a body formed in 1899 with a view to the discussion and practical application of my proposals, with such modifications as might be deemed wise and necessary.

"A Garden City is a town planned for industry and healthy living; of a size that makes possible a full measure of social life, but not larger, surrounded by a permanent belt of rural land—the whole of the land being in public ownership, or held in trust for the community."

The Garden City Association in 1902, under the chairmanship of the late Mr. Ralph Neville, K.C. (afterwards a Judge of the High Court), took steps which resulted in the formation in 1903 of the First Garden City Company and the acquisition of 3,818 acres of land in Hertfordshire (about 12 miles N.E. of Hitchin Junction) on which to build the new town. The total population on that area was then about 250, of whom 75 lived in the decaying village of Letchworth.

The cost of the land (which was in the hands of about 14 different owners) was £151,000, or about £40 an acre, including timber and buildings.

Great possibilities at once arose from this welding together of 14 small properties into a single large one, acquired by a Company formed to render the community a great public service, and which limited its dividends to 5 per cent. cumulative, all profits beyond those to be expended for the benefit of the town or its inhabitants. For the Directors acquired as landowners powers to do many things for the development of the town, some of which even a great city like Manchester does not possess; for while a private landowner can do with his property anything that is not contrary to law nor injurious to others, a local authority may only do what is by Statute expressly empowered to do, and is frequently greatly hampered by the ownership of much of its area being in the hands of private individuals.

Armed, then, with very wide powers, extending over an area of six square miles, and with the great advantage of a practically "clean sheet," the First Garden City Company, without the delay and expense which would be caused by seeking Parliamentary powers, at once proceeded to do some very important and practical things.

First, under the advice of Messrs. Parker and Unwin, a town plan was prepared—a step which the Town Planning Act, passed six years afterwards, expressed by implication its strong approval of, while the appointment of Mr. Raymond Unwin by the Ministry of Health as their chief site-planning architect shows that the company had been wise in its selection of an expert. I am also proud to recall that Mr. Thomas Adams, the first president of the Town Planning Institute, gained much practical knowledge of land development as manager of the First Garden City.

The new town of Letchworth was to be "planned for industry and healthy living," and, therefore, the first question to be settled was as to the most suitable site for the erection of factories and workshops.

For this purpose our town planners wisely selected an area of about 150 acres, approximately level towards the east of the town, and on the north and south sides of the Great Northern Railway, to which sidings could be readily laid.

And now there have been established, and chiefly on that site, more than 50 factories and workshops, including various large engineering works, steam laundry, motor works, geyser

works, printing and binding works, works for the manufacture of scientific instruments, lace and embroidery, bi-focal lenses, corsets, agricultural engineering machines, furniture, silk-weaving, etc.

On this factory area there are—with the exception of two or three caretakers' cottages—no dwelling-houses, and the industries are to a surprisingly small extent ever in unpleasant evidence.

Under the company's landowning powers a drainage system (since taken over by the U.D.C. of Letchworth) has been well carried out—also waterworks, gasworks, electric power works. Indeed, the company is supplying the town of Baldock with pure water in bulk—thus meeting a crying need of a neighbour—and will shortly be supplying it with electricity.

Briefly, then, in the centre of the wilderness of 1903, there has arisen an extremely healthy, airy, clean, well-planned, beautiful and steadily growing town of 11,000 inhabitants—with varied industries and a large agricultural belt. Thus has been quite literally realised the dream of Ruskin: for "from any part of the city fresh air and sight of far horizon is reachable in a few minutes' walk."

There is no overcrowding of houses upon the land—never more than 12 cottages per acre, thus allowing of good gardens. There are numerous playing fields and open spaces within the town—an open-air swimming bath, boys', girls' and other clubs, schools, halls, churches, museum, cinema, cottage hospital, etc.

And, as every medical man would have predicted, the result has been greatly improved health and efficiency; large employers of labour assuring me that their men are better clothed, enjoy better health, and do better work than they did in London. Visitors to the town often remark upon the health and vigour of the children, and the report for 1901 from the M.O.H. to the U.D.C. gives a death-rate for the year of 7.5, as compared with 12.1 for England and Wales, and an infantile mortality rate of 54.8 per thousand, as compared with 83 for England and Wales (96.98 for Manchester).

Now, certainly up to the close of the War I had never expected to take any active part in the raising of a second Garden City. However, about three years ago, opportunities arose in a very astonishing fashion, which made possible the acquisition of a truly splendid and most suitable site 21 miles from London, which I had often to cross by train, and viewed with longing eyes on my way to and from Letchworth.

I propose now to say a few words about Welwyn Garden City. I shall then exhibit some slides of both of these towns, and afterwards show how the country may profit by the experience gained in the partial carrying out of these two enterprises.

The Welwyn Garden City Estate embraces an area of 2,378 acres, and is the freehold property of the Welwyn Garden City Company, formed in May, 1920, with an authorised capital of £250,000, of which £111,000 have been fully subscribed. It is also issuing 6 per cent. debentures, of which £80,000 have been taken up.

This company is the first "authorised Association" for the purpose of a Garden City to have its claim approved, and has received a first loan of £117,000 from the Public Works Loans Commissioners for estate development.

Further loans are obtainable up to the amount of 75 per cent. of the valuation of the company's interest in the land, subject to the further condition that an amount equal to the Government advance is raised in shares and debentures. The rate of interest is that payable for the time being on public loans.

The property is from 250 ft. to 410 ft. above the sea level. There is an abundance of gravel and sand. Much of the scenery is extremely beautiful. The River Lea is near the southern boundary of the Estate, and the River Mimram passes through the northern portion—the Mimram Valley being one of the beauty spots of Hertfordshire. The Estate is intersected by the Great Northern Railway Main Line; and two branch lines (to the west to Luton and Dunstable—to the east to Hertford) have their physical junctions practically in the centre of the Estate, near which the Great Northern Railway Company have built a temporary station and have purchased 73 acres of land for a permanent station, sidings, etc.

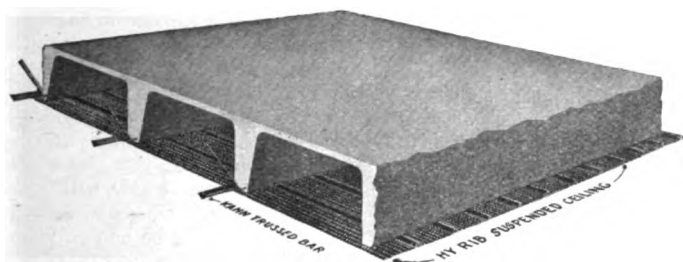
It is intended to develop some 120 acres of land which lies to the east of the railway for industrial purposes, and Messrs. Murray, confectioners of London, have taken a lease of 10 acres; Messrs. Pease and Co., engineers, an area of 10 acres, and have commenced operations. A small town of 1,300 has grown up, the population of the Estate when purchased being 328. Modern sewage works have been constructed and sewers laid. The town is supplied with the company's water, with gas from the Welwyn and Hatfield Gas Companies, and with electricity from the North Metropolitan Company.

Two hundred and forty-three houses have been erected, and 101 are in course of erection. The County Council of Hertfordshire

* A Paper prepared for the Conference arranged by the Manchester and District Joint Town Planning Advisory Committee.

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has purchased $2\frac{1}{2}$ acres for a school, which is being erected. A restaurant near the station, and in very picturesque surroundings, has been opened, as well as a large general store. The New Town Trust, Limited, which is working in close co-operation with the company, has been granted a lease of a considerable part of the agricultural belt, and is providing the town with a supply of Grade "A" milk, and with other agricultural products.

The chief difficulty that is experienced is in the provision of suitable cottages for workers. 50 cottages of this class are now being erected by the Welwyn Rural District Council, and will shortly be completed. 100 more will be started upon by the R.D.C. when the rate of interest is reduced to 5 per cent. If this difficulty of housing workers under really good conditions can be overcome, then we should quickly attract to the town from London or other overcrowded centres all the industries needed for the harmonious development of our town, and should thus help the nation to work in various ways towards the best solution of the housing problem, as well as many others with which it is closely associated.

Let me now turn to that side of the Letchworth enterprise which at first sight appears the least satisfactory. The nominal capital of the First Garden City Company is £300,000, but owing to the lack of faith of the British public in ideas the company went to allotment with £75,000, or about half the sum the land had cost. (Even to-day, the ordinary share capital of the company is only £193,000.) This necessarily involved at the outset much delay and expense, as well as mortgaging the property in order to raise funds for its development. Indeed, throughout the whole existence of the company, its directors and officers have had to devote much time and attention to the raising of money, which could otherwise have been much more profitably employed in planning how that money could best be used.

But in spite of these great hampering difficulties, and in spite of the fact that we were working in an untried field, and made many mistakes which future enterprises may avoid, the company has always paid with perfect regularity interest on all preference shares and loans of every description.

Last year the rate of interest paid upon all capital, whether ordinary or preference shares, debentures, mortgages, or loans, averaged a little over $3\frac{1}{2}$ per cent. The directors have always pursued a very cautious policy, and the shareholders only received $2\frac{1}{2}$ per cent. that year. However, the lettings of land have been very much larger during the current year, and the directors are satisfied that a dividend of 5 per cent. will, ere long, be reached, and that then arrears may begin to be paid off.

Viewed, then, from the point of view of dividends to the shareholders, the enterprise has certainly not been up to this time a success. On the other hand, the company owns an estate which is steadily increasing in value: so that, from the point of view of an ordinary land speculator who could afford, to wait, the results would appear in a different light.

Let us now look at another side of the picture.

Is it not evident that the nation, as a result of the public spirit of the shareholders of the company, has received dividends which, having regard to the small amount of capital invested, are really large and handsome. These dividends have been the greatly increased strength, vitality and efficiency of some thousands of people. But this is by no means all.

Before the War there were on the Letchworth estate about 1,000 cottages for working people erected by various agencies—chiefly Public Utility Societies. These cottages cost from £150 to £250, and were let at rents rising from 4s. 6d. to 10s. a week, including rates. Thus, by this means, we had succeeded in housing a considerable number of workers in comfortable homes near the scene of their daily work, so that they could go home to their mid-day meals.

Now, naturally, the workers, especially those with families, appreciate these conditions, and a good many men who I know have actually refused to leave the town and go elsewhere, even though they have been offered higher wages, and this chiefly because they and their families enjoy very much better health.

But the very satisfaction that one felt in seeing so many bonny children who had been far from bonny when they were living in crowded tenements elsewhere, occasioned bitter disappointment when we saw, as one might do any week-day, hundreds of people—men, boys, and girls, who had been working in the town, going off late in the afternoon on foot, on bicycles, buses, and trains to their homes, sometimes a good many miles off, and to conditions of life which were by no means as desirable as those that prevailed in our town. Now, why did this condition of things exist? It was simply because the numerous Housing Societies at Letchworth could not raise, on terms of $4\frac{1}{2}$ and 5 per cent. the funds required to reduce this to-and-fro movement to proper and reasonable dimensions. Now, but for this fact the gain of the nation would have been very much

larger. For, see what happened after the War. The Letchworth Urban District Council, under the able and energetic leadership of its chairman, Mr. E. F. Ball, succeeded in arranging with the Ministry of Health that 770 cottages should be built on our Estate, and built nearly all of them have been. The rest are nearly finished, and a fine lot of cottages they are.

But the cost of each of these cottages was more than £800 greater than the cost of cottages with quite equal accommodation built before the War. In other words, if these cottages had been built six years earlier, the nation would have been saved some £420,000. But even this does not fully represent the loss occasioned to the nation by this delay. If these 700 cottages had been built before the War then during those preceding years each of those cottages might have been fulfilling its true destiny as the home of rosy-cheeked children, and would have done not a little to lessen the serious overcrowding which existed for a time in Letchworth when, during the War, 200 Belgians came to Messrs. Kryn's works. You will, of course, perceive that this is but a single, though very clear, demonstration of the terrible losses which the nation has been suffering owing to its delay in dealing boldly and generously with a problem which ought to have been settled long ago.

Now what is the lesson to be learned from this? It is surely that the nation has to do its duty some day. God—or, if you will, natural laws—will see to that. Each day's delay makes the performance of the duty harder, and the longer the housing problem remains unsolved, the more costly will it be to solve it. Let it not be said that the nation—that is, you and I—cannot afford that the workers should be housed properly. On the contrary, we cannot afford that the workers of this country should be enfeebled and discouraged and demoralised by living under the conditions in which millions of the people of these islands live. I know that there is a ridiculous notion abroad, held by people in authority, that this is not the time for spending, but for saving. On the other hand, I affirm that the truest method of saving is to spend wisely, and this is the more necessary after years of expenditure in that most wasteful of all forms of spending—War.

Searchlights of Publicity.

A remarkable advertising sign has just been erected on the Mazda Electric Lamp Factory at Rugby. This sign—the biggest, heaviest and most brilliant of its kind in the kingdom—overlooks the London and North Western main line. It measures 33 feet by 22 feet, and consists of opal glass-faced letters on a steel framework, bolted to the factory roof. Instead of being lighted by a number of small lamps fixed to the sign itself, it is illuminated far more brilliantly from a distance by means of B.T.-H. Floodlight Projectors equipped with Mazda gasfilled lamps. By the former method, at least eight hundred 10 watt lamps, representing a total consumption of 8,000 watts, would have been required. By the new method a much better effect is obtained from four 1,000 watt Mazda gasfilled lamps.

Apart from the higher brilliance and economy of the B.T.-H. system, it has the further advantage of eliminating glare, thus giving a greater degree of visibility and contrast than is possible with the ordinary self-lighted sign.

The flood of illumination from the projectors is focussed on the sign, so that the message stands out in letters of fire against the inky background of the night sky. The individual letters alone are lighted, and these are sharply defined against the surrounding blackness. All else is invisible. In effect, the new method represents the application of the naval searchlight to the needs of outdoor publicity.

The B.T.-H. system, by reasons of its unique effect, low capital and maintenance costs, and economy in current consumption, opens up a new era in outdoor advertising—an era in which mere blatancy will give place to correctly regulated illumination.

The Hull Corporation Health Committee last week approved of the New George Street Housing Scheme, under which 180 houses are to be erected on a site which will be cleared of tenements that are condemned as unfit for human habitation. The City Treasurer had prepared figures showing that the total cost would be £106,515. The total deficiency is estimated at £3,256 per annum, and, with the Government grant of £2,000, this would be met by a farthing in the pound from the rates. Tenders for houses in North Hull (under the Assisted Housing Schemes) were accepted as follow:—Mr. H. Johnson (Hull), eight blocks of four, non-parlour type, with three bedrooms, £1,504 ls. per block; one block of two, non-parlour type, two bedrooms, £692 19s. per block; and Mr. A. N. Whincop (Hull), eight blocks of two, non-parlour type, three bedrooms, £795 11s. 11d. per block.



This is IMPOSSIBLE with CLARK'S WET-PROOF BACKING

What is more useless and annoying than a spotty or clouded silvered plate? And yet the best silvering is apt to be thus affected when the plate is fixed in damp and insufficiently-aired positions. Even in ordinarily dry positions it is frequently found that the damp and wet penetrates after a time, and then nothing can save the plate but re-silvering. The only known preventive is

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a simple, effective and inexpensive process. Every plate treated with CLARK'S WET-PROOF BACKING is guaranteed against damp, wet, atmospheric moisture and changes in temperature, and the trifling cost is repaid many times over.

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A famous firm's opinion:

CROWN WORKS,
SOUTH LAMBETH ROAD,
LONDON, S.W.8.
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DEAR SIR,

The large Mirrors with your Wet-Proof Backing, supplied over 9 years ago and placed in a very damp position on one of our jobs, are to-day perfectly good and quite free from any defects in the silvering.

This is remarkable, since the wood frames and backboards, also the wood sills on which these Mirrors rest, have completely rotted owing to the damp.

Yours faithfully,
(Signed) HIGGS & HILL, LTD.

SHALL WE SEND YOU PARTICULARS?

*James Clark & Son, Ltd, Arches, Blackfriars Rd. London, S.E.
Kent Branch: Roper Road, Westgate, Canterbury.*

Trade Notes.

On October 6 a Complimentary Dinner was given by the Directors of Messrs. Samson Clark & Co., Ltd., advertising agents, to the staff of Messrs. Bovis, Ltd., contractors, in the building occupying a large site at the corner of Mortimer and Great Titchfield Streets, who erected it to the design of Mr. Courtenay Constantine, F.R.I.B.A. The building has a total net space of 32,323 square feet, and is the largest in the United Kingdom, which is entirely devoted to advertising service. The occasion of the dinner was instigated by Mr. Samson Clark, as a token of the service of the contractors in erecting the premises within contract time. A most congenial evening was spent, with Mr. Samson Clark as host to an old-fashioned English dinner—roast beef, ale, and churchwarden's pipes being in conspicuous evidence. Speeches were made by Mr. Samson Clark, Mr. Courtenay Constantine, Mr. Sidney Gluckstein (managing director of Bovis, Ltd.), and Mr. Rapley (the foreman on the job).

Messrs. Broad & Co., Ltd., 4, South Wharf, Paddington, W.2, in the seventh issue of "The Broad View"—their capable little monthly house journal—point out that though the urgency of the times inevitably robbed business of some of its former personal touch, yet they have made a point of still retaining it as far as possible. Other topics touched on are the reduction in price both of Caparata (reinforced plaster), partition slabs, and Victorite Plastering Cement, the subject of packing before dispatch, and their newly-patented heavy road manhole cover and frames, the No. 29 "Agripper." The latter is described and illustrated.

Messrs. W. & G. Foyle, Ltd., booksellers, 121-125, Charing Cross Road, W.C.2, have sent us the latest edition of their catalogue of technical and scientific books (second-hand and new). This is only one of no less than twenty-one different catalogues published by the firm. Messrs. Foyle are constantly increasing their great stock, and are ready to make every endeavour to obtain any book which may be required.

The Housing and Health Exhibition organised at the Kelvin Hall, Glasgow, by the Glasgow Corporation was inaugurated last week. It is on a comprehensive scale, and includes 307 stands occupied by 239 exhibitors. A feature of the stand of Willis Heeley, 196, St. Vincent Street, Glasgow, is a room with Fiberlic walls and ceiling. The sheets on the walls are placed vertically, showing a 4 ft. wide panel by about 7 ft. high, in which an inner panel about 5 ft. by 2 ft. wide is formed of Japanese paper with dark background, applied with a small wood moulding all round, and a stippled frieze with unbroken surface and white ceiling, giving an unusual restful and pleasing effect. Fiberlic has been extensively used with decorative effect on a number of stands in the Exhibition. Other exhibits on this stand are a screen of Weathertight Steel Windows, and various types of reinforced concrete fencing posts and rails.

General.

Plans for over 150 new houses were approved at the last meeting of the Croydon Borough Council.

A company is being formed to erect a new opera house, café, restaurant and winter gardens, and ballroom in Colwyn Bay.

A new building is to be erected for the Nottingham Y.M.C.A. It will be in Parliament Street, and is estimated to cost £40,000.

It has been decided considerably to extend the Eastbourne municipal baths at the east end of the borough, by taking in the premises now occupied by the borough branch library. A new site is to be found for the library.

Margate Town Council, at a meeting on the 10th inst., adopted a proposal to construct a bathing pavilion on the Marine Terrace sands at an estimated cost of £25,000. The pavilion will provide accommodation for three hundred persons, and hot and cold shower-baths, and it is hoped to have it ready by next season.

The Commercial Secretary at Cologne has forwarded to the Department of Overseas Trade an extract from the "Kolnische Zeitung" of September 26, which states that the German Cement Syndicate has, with effect from October 1, reduced the price for deliveries of cement to Holland by 1.50 fl. for the Southern districts and by 4 fl. for the Netherland oversea districts in order to meet English competition more keenly.

The Ministry of Health has agreed to the Ashington Council accepting the tender of the Co-operative Wholesale Society for three blocks of four houses at £324 per house; four blocks of two at £327 6s. per house; four blocks of four at £329 per house; and two blocks of two at £332 10s. per house. Sanction is given on the understanding that no extra expenditure will be allowed and no cost of electric meters and service to the houses will be chargeable against the housing accounts, and that the Council make arrangements for adequate funds before the contract is signed.

The Wolverhampton Town Council, on Monday last, adopted a resolution calling upon the Housing Committee to institute inquiries as to the probable cost of the immediate building of 250 houses under the financial responsibility of the committee, and to report to the Council at the earliest possible moment.

A restoration scheme costing twenty to thirty thousand pounds is to be carried out in connection with Hartlepool Parish Church. The massive tower has been gradually falling for 700 years, and great anxiety is felt for its safety. Great cracks have appeared in the tower, and the foundations are insecure. The scheme includes the extension of the chancel, the rebuilding of the east window, and the restoration of the Galilee porch.

Subject to the approval of the City Council, the Town Clerk of Leeds has been instructed to apply to the Ministry of Health for permission to invite tenders for a further 50 houses on each of the Middleton and Crossgates housing estates. The Improvements Committee has decided that the question of applying to the Ministry of Health for sanction to borrow further sums of £700,000 for housing purposes, £86,000 for gardens and fences, £9,816 for sewerage works, and £33,000 for street works on the housing estates, should be referred to the Finance and Parliamentary Committee.

The following figures show the progress that has been made in State-aided housing schemes in Scotland to August 31, 1922:—Permanent houses completed, 10,818; temporary houses completed, 665; reconstructed houses completed, 89; houses completed under the private subsidy schemes, 2,107; making a total of 13,679. There are 8,301 houses at present under construction in connection with housing schemes carried out by local authorities and public utility societies. The total amount paid by the Scottish Board of Health in respect of the 2,107 houses completed under the private subsidy schemes is £509,927.

It is announced that the contract for the construction of the new tube railway between Edgware (Church Lane) and a point north of Queen's Road, Hendon, has been given by the Underground Company to the Foundation Company, of Kingsway, London. The amount of the contract is £258,468, and provides for the construction of permanent way, steel super-structures and bridges, electrical equipment, signalling, station buildings, &c. There will be stations at Collindale, Burnt Oak, and Edgware. The length of the new piece of line will be three miles. The work is scheduled to be completed in fourteen months' time, and it is estimated that some 10,000 men will be employed.

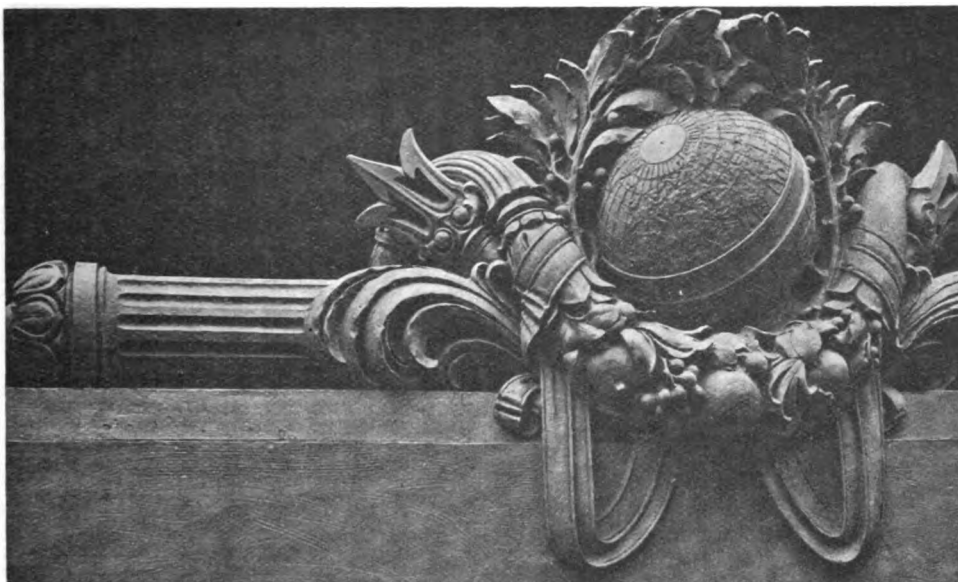
A mural memorial, placed in the Birmingham University vestibule at Edgbaston, last week, commemorates the 170 former members of the staff and students who fell in the war. It was unveiled and dedicated by the Bishop of Birmingham on Sunday afternoon. The memorial is from the designs of Sir Aston Webb, P.R.A., the architect of the new University buildings, and has been executed by Messrs. Farmer & Bindley, of London, and Mr. T. Rowbotham, of Birmingham. It has been executed in light yellow marble, and takes the form of three large panels. The centre one, surmounted by the arms of the University, in true heraldic colours, bears the dedicatory inscription in black letters. Then follow, in red lettering on the three panels, the names of the men who fell in the war.

Replying to a question by Sir Banister Fletcher, at a meeting of the Corporation of the City of London, on the 5th inst., Mr. Stanley Stone, chairman of the Bridge House Estates Committee, said that he had received an intimation from the lessees that they must proceed with the building at the foot of London Bridge, and would have to deal with the recently-discovered arch of Old London Bridge by a certain date. The committee had interviewed a deputation from those interested in its preservation, and informed the deputation that the constitution of the trust would not allow of the application of funds towards such an object. It had been suggested, however, that the parties interested should make their own arrangements with the lessees. Mr. Stone said he understood, quite unofficially, that there was some proposal to remove the arch to Wembley Park.

Messrs. Hillier Parker May & Rowden, of Maddox Street, W., acting in conjunction with Messrs. Patterson & Thomas, of Cook Street, Liverpool, were the agents responsible for the notable letting of the "St. Peter's Church Site," Church Street, Liverpool, to Messrs. F. W. Woolworth & Co., Ltd., the bazaar proprietors. The site is said to be one of the most valuable commercial sites in the provinces, it having a frontage, after the necessary street widening, of 239 feet to Church Street, which is undoubtedly among the leading trading thoroughfares in the country. We understand that Messrs. Woolworths will be erecting immediately the largest store they have in this country, but a section of the site will be available for letting, and the same has been placed in the hands of the first named agents, who will be pleased to supply any information to trading concerns who would like to co-operate in the development of this fine site.

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PORT OF LONDON BUILDING. CARVING OVER SECONDARY ENTRANCE.

The Port of London Building.

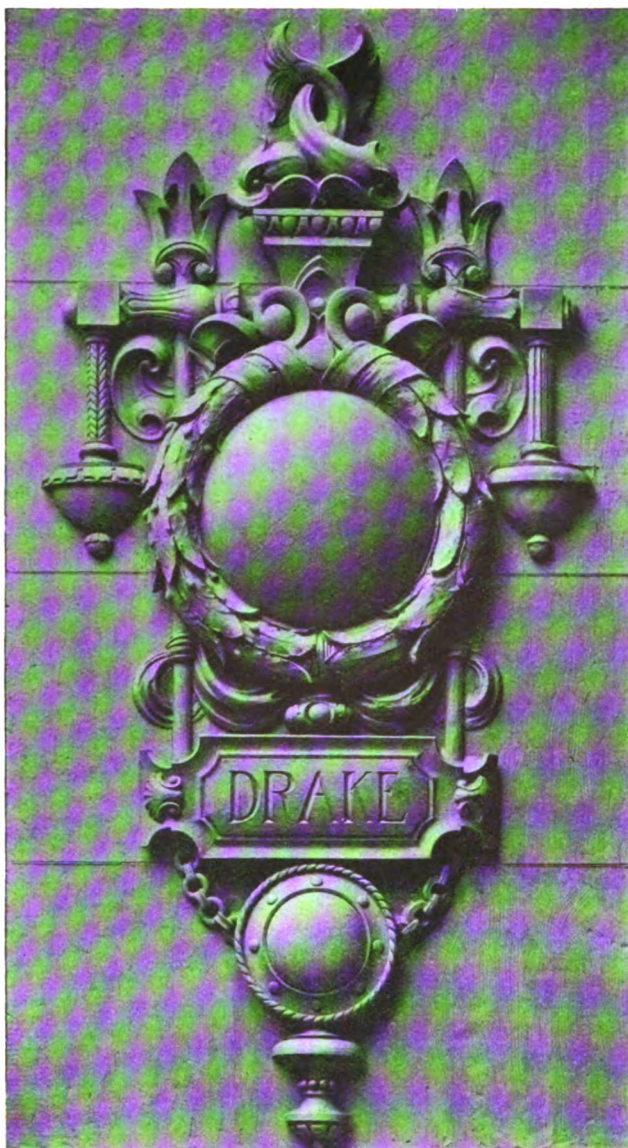
The opening of the Port of London Authorities' new building in Trinity Square by the Prime Minister marks an epoch in both the economic and architectural history of London. It reminds us by an outward and visible sign that the management of the greatest port in the world is now under the control of a central authority which is rapidly doing all it can to render the metropolis worthy of its foremost position as a great maritime centre; whereas in former years London was spoken of as holding an inferior position to Antwerp, Hamburg and other foreign ports when the question of modern dock accommodation with all its accessories were under consideration. London owes much to Lord Devonport, who abandoned politics to serve its shipping interests, and who, as the head of the new Authority, has made for himself a name which will be always remembered in the records of the great city whose interests he has so ably served.

Architecturally, London has gained by the erection of a building which we confidently believe will be regarded in centuries to come as possessing outstanding merit and which does the greatest credit to the skill of the architect who is responsible for its design.

Looking backwards we recall the history of the interesting competition which was decided in 1912 by the appointment of Mr. Edwin Cooper as Architect, with the unanimous approval both of those who had entered the lists with him and those who studied the designs submitted as spectators. The Port of London Authority set a difficult problem to competitors, who had to select the site for the building from an area a large portion of which had to be preserved for commercial development, while new streets had to be formed the direction of which depended on the plan of the Port's new buildings. For this reason the diversity of the various designs submitted was greater than is usually the case. In the instructions to competitors it was suggested that the public offices should be grouped together to form one large hall, and this suggestion

undoubtedly led many to overlook the most obvious and reasonable solution by courageously adhering to, and following which, Mr. Cooper was able to produce a scheme which has never been excelled in its simple and perfect solution of the objects to be obtained in a great centre of business. The plan adopted hinges on the fact that the Port Rates office is, and must be, the focus of the arrangement to which everything else is subordinate. The building takes the form of a square of which the corner next Trinity Square, where the principal entrance is placed, is cut off. Secondary entrances are formed at the three remaining corners of the square, from which and from the principal entrance the Port Rates office, a great circular-domed hall, 110 feet in diameter and 67 feet in height, is placed. This constitutes the most important section of the whole scheme, and in it an enormous bulk of business is transacted, and the remainder of the building takes the form of a continuous range of buildings and other rooms following the frontages six stories in height.

Staircases flank the main entrance-hall, which fronts Trinity Square, and the remaining angles of the building are marked by pavilion blocks, behind which are staircases. The Port Rates office is thus approached in four directions, while it can also be reached by secondary entrances in the centre of each side of the fronts. The ground floor contains the great public departments of the Port, which are treated as halls, with a broad central corridor divided architecturally at intervals by piers and lighted on either side from the street frontages and from the quadrant-shaped courts round the Port Rates office. The first floor contains the chief accountant's, controller's and solicitor's departments; the second or principal floor, the Board Room, chairman's and vice-chairman's rooms, the deputation room, library, members' cloak-room and committee rooms, as well as dining and reading rooms, while the eastern block is devoted to



PORT OF LONDON BUILDING. CARVING IN ENTRANCE HALL.

the general manager's department. The third and fourth floors, like the first, are devoted to administrative departments. In the basement are the telephone exchanges and postal departments, in which all letters inward and outward are sorted for delivery. It is unnecessary to give in words a detailed description of what can best be gathered from plans and illustrations, and we shall in this and our two succeeding issues give illustrations which will give a better idea of the building than anything we can say.

The architectural treatment of the subject is in every way worthy of a great monumental building which takes its place among the first works of English architecture. When we compare the scheme which has now been carried out with the design submitted in competition, we can form some idea of the great thought and consideration which has been expended on every detail of its design. The plan is practically unaltered, because that submitted was in almost every respect perfect as originally presented, the architectural treatment has been carefully revised and elaborated with the result that weaknesses which are inevitable in any competitive scheme have been eliminated.

The great central feature facing Trinity Square, for instance, has been carefully thought out, and in execution forms a delightful and dignified pile entirely satisfactory in its effects of light, shade and mass. The main fronts originally were designed with a



PORT OF LONDON BUILDING. CARVING IN ENTRANCE HALL.

rusticated story in which rested the main order. In the executed design this order includes the ground-floor story, while an attic over gives added emphasis and dignity to the whole composition. The sides and back of the building are simply treated between the pavilions, which mark the angles of the building. Internally the great features are the finely-designed main entrance hall, the domed and columned Port Rates office, and the magnificent suite of members' rooms on the second floor, as well as the fine range of public offices surrounding the Port Rates office. The general style of the building may be regarded as being founded on the lines of our English Renaissance, modified here and there by the wider experience and knowledge of French and Italian precedents, which are now part of the knowledge of the educated architect. It is inevitable that with our more cosmopolitan knowledge of style, and the greater interchange of thought with other countries that our architecture, like that of our neighbours', should lose some of its exclusively traditional traits, but it may be what the Port of London building is, a true and living example of tradition as modified by the tendencies of the age in which we live. In a word, the Port building will in time to come take its place with Somerset House and other of the works left by our more notable architects of the seventeenth and eighteenth centuries, and is a conclusive answer in stone to those who claim that architecture is an art of the past in England.

"The Architect" Fifty Years Ago.

OCTOBER 19, 1872.

IMPROVEMENT OF ST. PAUL'S CHURCHYARD.

Before long an alteration for the better will be made in the western portion of St. Paul's Churchyard. It is arranged that the dwarf wall which now surrounds the Cathedral facing Ludgate Hill, with the iron railings, shall be removed as far as the north-west and south-west corners of the fabric itself, and that the entire area or courtyard, in the centre of which stands the statue of Queen Anne, shall be thrown open to the bottom of the steps which lead up to the great western door. These steps will be newly-faced or cased; and nearly on the lowest step will be run along an iron railing of an ornamental character, which will not be seen at all by day, but will be raised up at nightfall by machinery somewhat analogous to that now used for raising iron window-shutters from below. This change has been conclusively arranged in consideration of a money payment from the City to the Cathedral body. It is probable, however, that some low stone-posts will be erected here and there around the space thus gained to the public, in order that the area may be fenced in on grand and exceptional occasions.

Our Illustrations.

PORT OF LONDON BUILDING. GROUND FLOOR PLAN AND VIEWS OF EXTERIOR.

Notes and Comments.

The Unsolved Housing Problem.

A correspondent of the "Birmingham Daily Post," writing on the Housing question, says that the spectacular headlines such as "Back to Private Enterprise" and "Private Enterprise within Sight" are altogether misleading, because wages bear a large proportion to cost and wages are now nearly stabilised at rates much in excess of those of 1914. But cost is not alone prohibitive, and if it were economically safe to build for the working classes few would build because the house-owner has been depicted as a leech living on the tenant and held up to every form of ignominy and contempt. Therefore there will be no general resumption of activity until confidence has been restored and a measure of respect for the landlord cultivated. There can also be no resumption of activities until there is a return to free conditions and an end to predatory legislation which limits the owner to an uneconomic return on his capital. All this points to the removal of the Rent Restriction Act. Whenever decontrol does come there will be hardships and distress, but it must be steadily borne in mind and insisted on that this and the evils we suffer and must suffer under are part of the price which has to be paid for the legislation of 1909. But there must be an end to hasty legislation as well as the repeal of unwise and unjust Acts, coupled with sure security for those who build that conditions will remain unchanged as far as legal rights are concerned.

Stone Wastage.

Mr. W. Carrick Anderson has contributed two useful and interesting articles to the "Glasgow Herald" on the subject of stone decay and its prevention. He describes in detail the various causes which lead to decay and scaling, and analyses the chemical nature of the changes responsible for the damage done, and then describes the various kinds of remedies employed. Paraffin wax applied to the surface of stone protects it, but unfortunately remains on the surface without penetrating any considerable distance into the stone. The various methods of silicating stone with mineral salts dissolved in water do the work more thoroughly, as they penetrate the open spaces in the interior of stone and both fill them up and produce chemical changes by the formation of more or less insoluble substances. In Scotland and the North of England the problem is a more serious one than in the South, for the average rainfall is greater, together with longer spells of frosty weather. In London it may be said that we have at hand a better weather-resisting material in brick, and that if we use stone we may say "*il faut souffrir pour être belle*"; in other words, that stone is a luxury and not a necessity. It would be advisable in the interests of common sense if some of the restrictions on certain London estates on the use of brick were relaxed or altogether abolished, for a saving both of first cost and subsequent maintenance would thereby be effected. The durability of stone may be described as a matter of degree, while that of good brickwork is very nearly a certainty.

The Manchester Town Planning Exhibition.

Owing to the success which has attended the holding of the Town Planning Exhibition in the Town Hall and the continued interest of the public in the exhibition, there have been many requests, including one from the Assistant Secretary of the Ministry of Health, that the exhibition shall remain open a few days longer and not close as was intended on Saturday evening. It has therefore been decided that the exhibition shall remain open to the public on Monday and Tuesday of next week between the hours of 10 a.m. to 8 p.m.

The greatly increased interest now taken in town planning is one of the most hopeful signs of the times.

Board of Architectural Education.

The Secretary of the Board of Architectural Education writes us that owing to Mr. C. S. White, of the Architectural Association School of Architecture, being unable to take up his R.I.B.A. Archibald Dawnay Scholarship, a fresh award has been made in favour of Mr. C. H. Hutton, of the Liverpool University School of Architecture.

The scholarship, which is £25 per year for two years in value, is intended to foster the study of advanced construction.

The Grand Avenue, Stowe.

As certain alarmist rumours seem to be current about the ultimate fate of the Grand Avenue at Stowe, Mr. Clough Williams-Ellis, the purchaser at the sale last Wednesday, would like it to be known that his sole object in securing this feature in one lot was to ensure its preservation in perpetuity as being historically part of Stowe as well as one of the chief glories of Buckinghamshire.

He felt that its destruction as an avenue or its exploitation as building land would be a calamity both for the school and the town of Buckingham too disastrous to be contemplated.

As an architect practising in London, with a property in North Wales, he has no special connection with Buckinghamshire, and only desires that its amenities should be preserved. The conservation of natural beauties and historically or architecturally interesting buildings is one of his chief interests and a cause that he has furthered both by "direct action" and by his writings.

As Mr. Williams-Ellis cannot hold this isolated piece of property indefinitely, he hopes that a local trust may be formed to take it over and conserve it intact for ever.

To such a trust, we understand, he would be willing to hand over his bargain, and, if the Avenue (itself almost as much of a "National Monument" as Stowe Palace) can be thus secured against destruction, Mr. Williams-Ellis will do his utmost to help the matter forward.

Bridgwater Tiles.

The Bridgwater Chamber of Commerce have been considering the action of the Ministry of Health in encouraging the use of French instead of English tiles for their housing schemes. A deputation to the Ministry of Health was received by Sir Charles Ruthen, who denied that the Ministry had given any preference to foreign tiles the use of which is going on in spite of the unemployment in English industries. The Bridgwater manufacturers tried in vain to get a promise from Sir Charles Ruthen that where all things were equal English tiles should be given the preference. The President of the Chamber of Commerce inquired how many men in the district could be trained in the Bridgwater works, and was told by the secretary of the local employment committee that they could take on 50 disabled service men in the area and give them remunerative employment. Another member told the meeting that during the last year the number of Marseilles tiles used here amounted to 30 millions. Finally the following resolution was passed:—

"That this meeting protests against the Ministry of Health using imported French tiles in Government housing schemes, and this Chamber co-operates with the national and local committees in bringing about the use of British-made tiles."

We are inclined to think that in these days of doles for the unemployed there is much reason in the criticisms made.

London Art Galleries.

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The London autumn season for art exhibitions, as I foreshadowed last week, is now in full swing. The Leicester Galleries exhibition is already opened. The exhibition of the portraits in bronze and marble at the Cork Street Galleries by Francis La Monaca, which I shall notice this week, opened on Thursday, October 12, to November 4. On the same day Walker's Galleries put on an exhibition of pictures and drawings by the late Hugh Bellingham-Smith and the late Sir Leslie Ward ("Spy"); the Collectors' Gallery in Sloane Street is showing landscapes by David Neave; the Fine Art Society water-colour drawings by Barry Pittar; the Alpine Club Gallery has now the Old Dudley Art Society; the Mansard Gallery at 106 Tottenham Court Road again extends its hospitality to the London Group; the Twenty-one Gallery at the beginning of this week is showing the paintings of Armand Jamar; and lastly, but by no means least, the Royal Institute of Oil Painters opened on Monday, October 16, its autumn exhibition, the Private View being on the Thursday preceding, October 12.

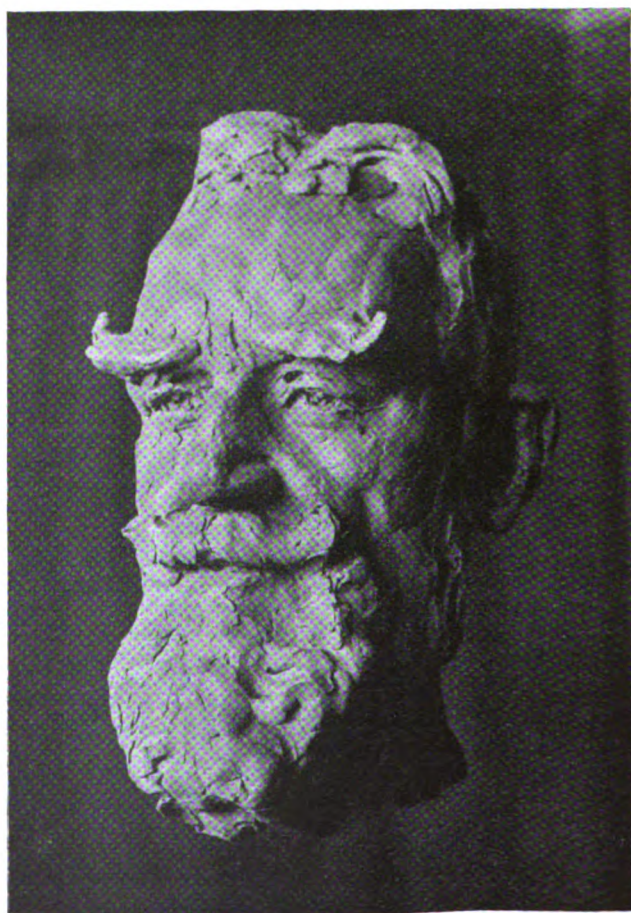
I expressed briefly last week my admiration of the paintings by Lucien Pissarro now being shown at the Leicester Galleries. Lucien, the eldest son of Camille Pissarro, studied under his father and exhibited with the Impressionist Group and the Société des Indépendants; after several previous visits he came to live in England in 1893, and in 1916 became a British subject, so that his work has the right to appear in the National Gallery of British Art. But I never enjoyed that work more than in the exquisitely delicate impressions of England here shown in such subjects as "Kingswear, Through the Mist," "Morning Snow, Kew Gardens," and yet again "White Frost under the Trees, Kew Gardens." Many of us enjoy those gardens in the "lilac-time" of spring or the glories of summer and early autumn, but M. Pissarro has found and recorded their delicate yet penetrating charm of the winter months. No less attractive are his studies of Chiswick in sun or mist—"Chiswick Mall, sunny effect"—and the same with "grey effect"; and the chalk drawings are to be noticed. One could scarcely have found a greater contrast to the refined beauty and quiet charm of these paintings than the strident colour of the weird birds and beasts against strong blues or greens which Simon de Bussy shows in the next room. One would scarcely want to live with such subjects as "Les Etourneaux Bleus" or "L'Aigrette aux Tours Jaunes," which would be like dwelling in proximity to an energetic brass band; but there is a decorative quality throughout, which comes out in some of the single figures of beasts, such as "La Panthère," "Le Jaguar" and "La Tortue," and the grouping of "Les Corbeaux."

It is in the entrance room that we find the interesting set of contemporary portraits displayed in the drawings and dry-points of Mr. Walter Tittle. There are twenty-five dry-points here, but I myself prefer the drawings—of which there are a smaller number—in some cases as being more direct; and it is a point to be noted that these dry-point portraits and drawings of well-known figures in politics and letters are in every case here signed by the sitter, which gives them an added interest. The drawings include among English men of letters Mr. A. S. M. Hutchinson, whose work in fiction has been so much to the front of late, Mr. W. W. Jacobs, Mr. Maurice Hewlett, Mr. John Drinkwater, Sir Hall Caine, and an excellent portrait of Sir Rider Haggard which seemed to me to show a certain likeness to an old friend of mine, the late Mr. Grant Allen, though the resemblance may be only a slight one. These drawings appear to me to be worked out in soft chalk; and in the "dry-point" studies the politicians and soldiers predominate—President Harding in full face and profile, an excellent likeness of the Earl of Balfour, the well-shaped head of Sir Robert Borden and strong features of the Earl of Cavan. Marshal Foch does not seem to me a good likeness, for the face has a certain hint of weakness

which is not to be found in the original; nor is the dry-point of Sir Auckland Geddes satisfactory, the lines being too sharp and violent. On the other hand, in his comparatively few portraits of women the artist is successful in Mrs. Joseph S. Frelinghuysen of Washington; and in his "Miss Betty Ann" he has given us the most delightful little baby face imaginable.

At the Fine Art Gallery in Cork Street, W., we have also portraits, but here in bronze and marble by the Italian sculptor, Mr. Francis La Monaca. Mr. La Monaca gives us the impression in his portraits shown here of being a quick worker, seizing the impression of his sitter with a nervous energy, and this impression is confirmed by Mr. T. P. O'Connor in his words of preface to the present display. "Mr. La Monaca," he writes, "is the most patient and most painstaking of sculptors, his own severest critic, but he combines with this a lightning speed in work that is astounding. . . . A dash of clay thrown rapidly; and you saw it immediately transformed into a feature—your nose, your eyebrows, your eyes, your lips, or into a curl of your hair. And all the while this transformation was taking place I was free to talk with my visitors, to work at my desk, to carry on just as if there were no artist and no bust."

This was something of the method of the great Bernini, who allowed his sitters the freedom to show their natural attitude, expression, character; one might even say it is the only method for living portraiture. And these portraits by Sig. La Monaca are certainly alive. One of the strongest heads here is that of Dr. Russell Wakefield, Bishop of Birmingham, and the Church is also represented by the Dean of St. Paul's, the Very Rev. W. R. Inge, where the lines of the features seemed to me unduly accentuated, and an excellent portrait of the Archbishop of Canterbury. I have just mentioned Sir Rider Haggard, K.B.E., and here he appears before us in bronze, quite as good a likeness as that of the chalk drawing I have just described. The marble head of G. Bernard Shaw is characteristic, and I have in my hands a photograph of the clay model from



G. BERNARD SHAW
(First Clay Sketch for Portrait Bust)
By F. LA MONACA

which this was finished, and which is a very clever spontaneous piece of modelling. To the world of official politics belongs the Hon. J. G. Jenkins (an excellent bronze bust), who was Prime Minister of South Australia; and to medical science Sir Henry Lunn, M.D., and the well-known skin specialist, Dr. Graham-Little, F.R.C.P.

Mr. La Monaca seems to me singularly happy with his children's portraits here, notably in the charming bust portrait of Miss Helen Viola Graham-Little, the pretty daughter of the gentleman last mentioned; and in his portrait sketch of the two daughters of the Hon. Mrs. Dudley Ward, with bare legs, and his very alive mask of Miss Hather Leslie Wilson. Among his women sitters are to be noticed the bust and statuette portraits of Mrs. Dudley Ward, and a bronze bust of Miss Sybil Thorndike, which seemed to me to present a good likeness of our leading "tragédienne."

I reserve my full notice of the Royal Institute of Oil Painters for next week's issue. What struck me specially at the private view to-day was the work of two women artists—Miss Anna Airy, R.I., R.O.I., in a brilliant flower piece, "The Bride's Bouquet," and Mrs. Betty Fagan, R.O.I., in a no less brilliant figure study—"Morning"—of two young girls treated almost with the freedom and mastery of the late Anders Zorn. In landscape this time Tom Robertson, R.O.I., Lewis Gibb, and F. Spenlove-Spenlove are to be noted; and Davis Richter's flower paintings are superb.

From Monday last, October 16, by kind permission of the trustees of the Felton Bequest, a "Madonna and Child" by Jan van Eyck, which has been purchased by them from the Ince Blundell Collection for the National Gallery of Victoria, Melbourne, will be exhibited in Room XV. The picture will remain in the Gallery for about two months before being sent to Australia.

S. B.

Correspondence.

To the Editor of THE ARCHITECT.

SIR,—The Lord Mayor has kindly consented to a Meeting being held at the Mansion House, on St. Luke's Day, October 18, at 3 p.m., in aid of the Royal Northern Group of Hospitals, on whose behalf Viscount Ednam, M.P., Rt. Hon. H. J. Tennant, Mrs. Kendal, Mr. Stuart de la Rue, and others will speak.

Few hospitals have been hit by the changing times as badly as this institution, which, being practically unendowed, has to raise the bulk of the money required each year for maintenance from voluntary sources.

In these most difficult times all wards have been kept open, but the result is an accumulated debt which now amounts to £36,000. Unless a large part of this sum is forthcoming by the end of the year we shall have to curtail considerably the activities of a hospital organisation which even now is scarcely adequate to the needs of the immense area served.

The public, realising that the past few years have been critical ones for the hospitals generally, have responded nobly, but I appeal to your readers, especially those interested in the vast district of North London, to come, if possible, to the Mansion House, or if unable to do so to send a remittance, however small, to me at the Royal Northern Hospital, Holloway, so that an efficient hospital service may be kept available for a population of a million people.—Yours, etc.,

NORTHAMPTON, Chairman.

The interest of Miss Margaret Jourdain's new volume on "English Furniture and Decoration of the Later Eighteenth Century" will consist in its picture of social life and account of the phase of the classical revival. It treats of the remarkable achievements of the Adam Brothers, and also illustrates the work of their contemporaries and rivals, the interest of which is only beginning to be realised. Among architects Henry Holland, Thomas Leverton, the Wyatt family, and Sir Robert Taylor stand out, and there is also a group of able sculptors and designers, with brilliant decorative artists such as Flaxman, Pergolesi, Angelica Kauffmann and Rebecca. The work comprises over 400 illustrations, arranged under decorative features and furniture. The book will be issued in the autumn by Messrs. B. T. Batsford in the Library of Decorative Art, and a uniform volume on the Tudor and Elizabethan periods completes the series in the spring.

Two Old Inns.

By C. G. HARPER.

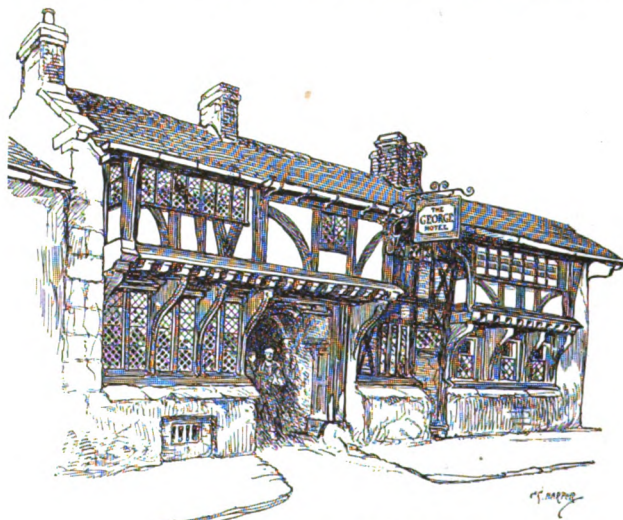
Yeovil in Somerset is a thriving town, prosperous in the glove-making and agricultural market way; with a population of about 10,000. Like many another old West of England town, it suffered much in times past from fires, and that, perhaps, is the reason why it possesses so few old buildings of any interest, apart from its very considerable church, built of that beautiful yellow Ham Hill sandstone so often employed in those parts. Almost the only other buildings of any interest are the fifteenth-century stone-



THE "CASTLE" INN, YEOVIL.

built "Castle" inn, along Middle Street, and the heavily timbered "George," almost immediately opposite. There is also a large old coaching inn, the "Mermaid," but it is not of architectural or antiquarian concern.

The "Castle" and the "George" are both small houses. The first-named is supposed to once have been Church property and to have been a chantry, but little or no documentary history remains to tell us anything about it.



THE "GEORGE" INN, YEOVIL.

At the present moment it seems likely, unless better counsels prevail, that the "Castle" will shortly be demolished for the building on the site of it an entirely modern development; for it now bears the notice: "Site for Up-to-date Picture Palace." Of course, the owner of the property will, like any other property-owner, make the best sale possible, but it certainly does seem a pitiful thing that, in a street where so many commonplace buildings stand, and in a town already so modernised and bare of ancient and reverend things, the old "Castle" should be chosen for demolition.

Modern Methods in Building Construction.—XXXVII.

By Albert Lakeman, M.S.A., M.C.I.

FLOOR CONSTRUCTION.

One of the principal items to consider in the main structure after the type of framework has been determined is that of the floor construction, and this section of the work is very important owing to its magnitude and its effect on the strength on the whole building as regards weight carrying on the upper storeys. The method of construction adopted will be influenced in the first instance by the proposed use of the building, which will govern the load for which the floors must be designed and calculated, and to some extent the type of floor construction itself may be determined by the proposed usage, as a light hollow flooring, while quite satisfactory for office purposes, will not be suitable for the installation of heavy or moving machinery.

The types of construction may, for convenience, be divided up into four different kinds, viz.: (a) timber, (b) steel joists and concrete, (c) reinforced concrete, and (d) patent systems. There will be a few special forms of floor which may not strictly come under either of these definitions, as, for example, an open grating floor used sometimes in a power house or engine room, but these form such a small portion of the total flooring constructed that they can be neglected when considering the general principles of modern floor construction.

Of the four kinds mentioned, timber will not generally be adopted for large buildings of importance, and it may be placed under the old-fashioned methods for any work other than domestic buildings. Timber for construction was extensively employed in bygone days, and, in fact, it was practically the only known method for many years, but owing to its lack of fire resistance, its comparatively high cost for long spans, and its general unsuitability for modern work, it has been steadily displaced by more modern types.

The next development was the introduction of rolled steel joists and plain concrete for the floor panels, with large section joists or compound girders as the main supporting member. Cast iron girders were used at one time in floor construction, but as these are now quite obsolete for all classes of structure, no details of the methods are necessary.

With steel joists and plain concrete it was possible to give a floor of considerable strength and having good fire resisting qualities at a fairly reasonable cost, but some disadvantages soon became apparent, and in course of time modifications were made which had the effect of changing the character of the construction until the original method was no longer apparent. The disadvantages included the excessive use of steel, the large dead load to be carried, and the very small span that could be safely adopted for the plain concrete slab.

The steel used was excessive because the small section filler joists were generally governed by the span, which necessitated a size of joist that was extravagant in steel for the amount of load which it was called upon to carry, more especially as this steel was not scientifically placed to take the tension only, while the strength of the concrete which was capable of taking the compression had to be neglected owing to the form in which the steel was applied. The large dead load to be carried was caused by the use of excessive steel, and the fact that the concrete had to be made of a thickness which was out of proportion to the structural value of the material due to the fact that it was called upon to resist a tensional stress for which it is unsuitable, and also it was necessary to make the thickness of the concrete equal to the depth of the filler joists in order to give a flush surface and avoid the use of complicated shuttering and the introduction of a suspended ceiling. Where the concrete was placed above the top flanges of the filler joists the thickness was not governed by the depth of the joists, but this entailed a loss of headroom and a corresponding increase in the height of the building, besides giving a ceiling which

could not be finished flush for plastering without special provision being made which increased the cost. The small span that could be safely adopted for the concrete panels was due to the plain concrete being unable to develop much strength under tension, and full advantage could therefore not be taken of the property of the material to resist compression. The span of the concrete, which was generally only about three feet, meant the use of a large number of joists which required special trimming when openings of any size were necessary, and consequently a large amount of both steel and concrete were wasted as far as actual load carrying requirements were concerned owing to the lack of scientific application.

These limitations led to the introduction of reinforcement in the concrete panels to resist the tensional stress and allow the spans to be increased, and as the principle was developed it gradually led to the omission of the small steel filler joists, and the concrete slabs were carried by large section steel beams only, which were placed at 10 or 12 feet central. The next step was the development of reinforced concrete beams, which reduced the amount of steel required still more, and thus the reinforced concrete floor of modern type became an accepted method.

Reinforced concrete floors are essentially a modern method in floor construction, and they are applied to all kinds of buildings, regardless of the material used for the structural frame. It is therefore very general to find reinforced concrete floor slabs used in a steel framed building, and when the walls are constructed with brick or other material without the use of an independent structural frame the reinforced concrete floors will still be suitable, while the adoption of a reinforced concrete frame will always carry with it the selection of a reinforced concrete floor in order to give a monolithic construction. This type of floor construction has proved extremely satisfactory, as it can be designed to carry exceptionally heavy loads, it is comparatively economical in first cost, and it is eminently fire resisting, while it can be easily applied to suit any special requirements without involving waste of material. The objection is sometimes raised that cracks are frequently seen in concrete floors, and although these may not be dangerous they are unsightly, and when the wearing surface is applied directly to the concrete the cracks thus developed will result in the surface becoming disintegrated under continual traffic, especially if this traffic is of a heavy nature. It is quite true that cracks are frequently met with, but if the causes are investigated it will be found generally that the floor has either been badly designed, has been overloaded, or a settlement has occurred which has exposed the concrete to a stress which it was not expected to stand.

The author came across a typical instance of this quite recently, when a building had been erected with external brick walls which provided the paving for the reinforced concrete beams and slabs composing the floor. The building was erected from drawings prepared by the works department of the client, with the exception of the floors, which were carried out from designs made by a competent independent engineer who was employed by the contractor. The latter was under a guarantee that the reinforced concrete floors would be satisfactory as the clients were apparently not in a position to check the calculations and design generally, and they appeared suspicious of the method because the estimate for this type of floor proved less than any alternative. The building owner, therefore, wanted reinforced concrete floors in order to save expense, but he insisted on the contractor carrying the responsibility. The work was duly executed with good materials in a satisfactory manner, and the building was put into commission. Before the expiration of the maintenance period, however, several cracks developed in the floors, and the contractor was informed

that the balance of his account would be withheld until he complied with his guarantee and put the work into a satisfactory condition. The contractor was unable to account for the development of the cracks, and furthermore it was impossible to remedy the trouble without elaborate re-construction, and this would have entailed serious loss. An independent architect, conversant with reinforced concrete work, was therefore called in to investigate the matter and report if possible on the reasons causing the cracks. The design of the reinforced concrete floors were checked and found satisfactory in every way, and a thorough inspection was then made of the building, and every crack was recorded on a plan, together with a note of cracks which had developed in the walls of the structure. As a result of the investigation, the architect reported that the cracks in the floors were caused by a settlement in the walls due apparently to insufficient foundations and were not caused by any defect in the floor construction itself. When this report was presented, it was admitted that the walls were carried on made ground without any special provision, and the building owner agreed that the failure was undoubtedly due to this fact, and the report was accepted as final and the contractor's balance was released. This is put forward as an example of the manner in which the defects occurring in building work are frequently considered as being due to the use of a material or method that is somewhat new to the owner, who immediately jumps to the conclusion that the trouble is caused by the adoption of an up-to-date and possibly experimental method. Many defects have been allocated to reinforced concrete in the past, and the uninitiated have always felt secure in stating that cracks are unavoidable when concrete is used. Cracks frequently occur in brick walls, but this should not be sufficient reason for considering the material unsuitable, and the defect will always be caused, not by the use of the material itself but by its unsatisfactory application.

In the use of reinforced concrete floor construction it is essential to provide some distribution rods in addition to the main tensional reinforcement, and if sufficient provision is made for the distribution of stress due to temperature changes as well as the distribution of the stress caused by the dead load of the floor and the super-imposed loading, there is no reason why any trouble should be experienced from cracks, as these will be so minute as to be invisible to the naked eye, and they will have no damaging effect on either the strength or the wearing properties of the floor itself. When reinforced concrete slabs are used in conjunction with structural steel paving it is very important to provide tensional reinforcement in the upper surface of the concrete when it passes over the steel beams to prevent the concrete developing serious cracks on these lines and such reinforcement must, of course, be properly calculated.

Apart from any patent system of floor construction, which may be particularly suitable for a special case, the most reliable and economical method of constructing the upper floors of any building, apart from domestic dwellings, will undoubtedly be given by the use of reinforced concrete.

With regard to patent systems, some of these possess considerable merit, and they cannot be ignored in notes dealing with modern methods wherein cost, speed and suitability are being considered. Some of the patent methods will be limited to the use of special forms of reinforcement such as expanded metal and other types of mesh, in order to avoid the labour of placing numerous small rods and also minimise the risk of displacement during concreting, while other patent systems cover the whole of the floor construction. General notes on mesh reinforcement have already been given in connection with foundation slabs, and the different types have been fully described, and there is therefore no need to deal with them again in this section.

The patent systems covering the whole construction of the floor are designed generally to achieve saving in time and cost by reducing or eliminating the use of formwork, by reducing the dead weight to be carried, and increasing the span of the panel portion to avoid the

introduction of secondary and main beams. When the span can be safely made, as much as 15 or 20 feet for the slab or panel portion without the use of excessive thickness and weight, the edges of the slabs can be supported directly by beams which are carried by columns or piers without the introduction of secondary beams, and the spacing of the columns can still be at a reasonable distance. The ideal span for an ordinary reinforced concrete floor beam is about 20 feet, but where this spacing is adopted it is necessary to introduce intermediate or secondary beams to divide the panel up into spans of 7 or 10 feet if the reinforced concrete slabs are to be of an economical type. These secondary beams will add to the cost, and they are sometimes undesirable for other reasons, so that a patent system which can be executed with large spans for the slabs will possess an advantage in this respect.

One of the best known patent floors which possesses some distinctive features is the Siegart fireproof floor, which can be erected without the use of any centering. This floor is constructed with fore-cast hollow concrete beams about 10 inches wide, reinforced with ordinary round steel bars and links. The concrete used is made with proportions of aggregate and cement which give a very strong mixture, and the beams are manufactured at the works of the makers with special cover and machinery which ensures a uniformity of quality. When the beams are thoroughly matured they are shipped to the site of the building operations ready for use, and the fixing is a very simple matter. The beams are hoisted to the required level and placed side by side on the end supports, and the small space between is grouted up after the joint has been pointed on the underside. Load can be applied immediately to the floor as the concrete is matured when the beams are placed, and thus any waiting time is avoided. Some of the advantages of this system are (a) no shuttering is required; (b) the floor construction is light; (c) the hollow beams assist in reducing the passage of sound and minimise loss of heat; and (d) the work can be executed rapidly.

It is the only completely pre-cast type of concrete floor that is made, and the fact that it can be used without shuttering is of considerable importance.

The use of formwork involves the introduction of tradesmen who must execute their work before the permanent floor construction can be proceeded with, and the formwork itself is frequently an obstruction to other trades that must follow on, while the use of wet concrete means the introduction of moisture into a building which must be expelled before decorative work can be commenced satisfactorily. With a pre-cast floor no props are necessary, and immediately the beams are in position the work in other trades can proceed above and below.

A floor $4\frac{1}{2}$ inches thick constructed with these beams, will only weigh about 25 lb. per foot super, and then the dead load is very low. This type of floor is ordinarily made for any span up to 20 feet, and this secondary beam will not be required for the average type of building. Owing to the fact that the concrete is dry and matured when placed in the building, there is not much risk of cracks occurring through expansion and contraction.

The underside of the beams can be plastered in the ordinary way or the joints can be left fair and the surface be whitened for factory or warehouse purposes. When a good clean surface is required without the expense of plastering and to avoid any possibility of the pointing at the joists falling out under vibration from machinery, it is a simple and economical matter to line the soffit with a stout white lining paper which can be whitewashed or left plain.

This method of construction can be applied also to flat and sloping roofs which are covered with felt or similar material. In floor work the finish may be granolithic or other material which is applied directly on the top of the concrete beams. Many examples could be given of the successful application of this system in modern buildings, but sufficient has been stated to show the merits of these pre-cast beams.

(To be continued.)

Notes from Portugal.

By G. A. T. MIDDLETON.

No. II.—Coimbra.

Without possessing a single building of first-class rank, Coimbra is an architectural gem, set amidst beautiful surroundings, ranking with Rothenburg and Mont St. Michel, and possibly surpassing either, at any rate in variety of interest. At every turn there is something which appeals to the artistic sense: some balcony or doorway, a piece of the old wall, or some unexpected church, above one or below, glimpsed along the narrow hilly roads or byways. Also it is a clean town, and not expensive; most people can afford a penny for a cup of good afternoon coffee, when this includes the waiter's tip.

All through the centuries it has been a place of importance. For a considerable period it was the capital of Portugal, after the Moors had been driven from the north and were still holding Lisbon and the south; and that it was founded by the Romans there is ample evidence existing in considerable fragments of the great aqueduct which carried water to its isolated hill-top from the greater hills to the north. Much of this still stands, simple and impressive as all such structures are.

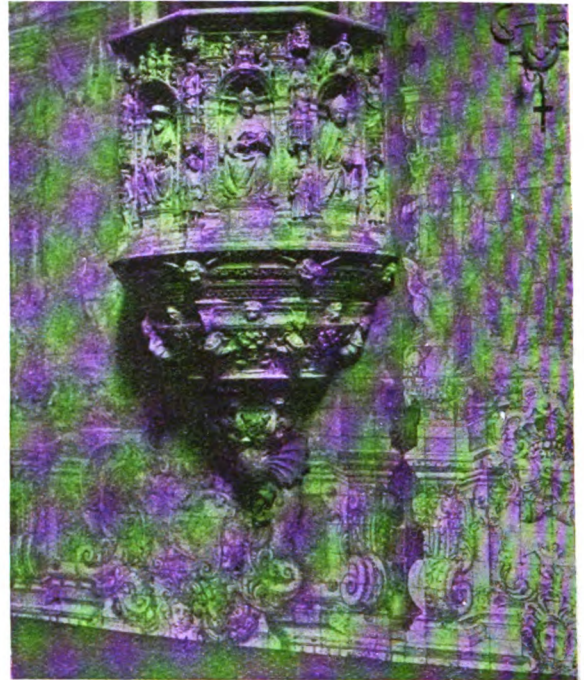
Most of the numerous churches can trace their origin



WEST FRONT, ST. THIAGO, COIMBRA.

to the Romanesque period, going back to about A.D. 1100, or in some cases perhaps a little earlier than this; and the most impressive, because it is entirely of one date, is the ruined shell of St. Thiago. Enough remains to show that its plan was that of a basilica, with nave and aisles covered by one low-pitched roof. It appears at one time to have had a chancel, but it has been cleared away for the tramway; and internally there are only a few fragments left of the simple columns which separated the nave from the narrow aisles. Otherwise it has suffered little. The west and south doors remain, and practically the whole of the west front and its approach of stone steps; and the general outline is Italian, though the strong doorway is of French type both in general feeling and in detail: large roll mouldings alternate with shallow hollows in each ring of the arch, and the capitals are either carved with crude acanthus or with grotesque figures.

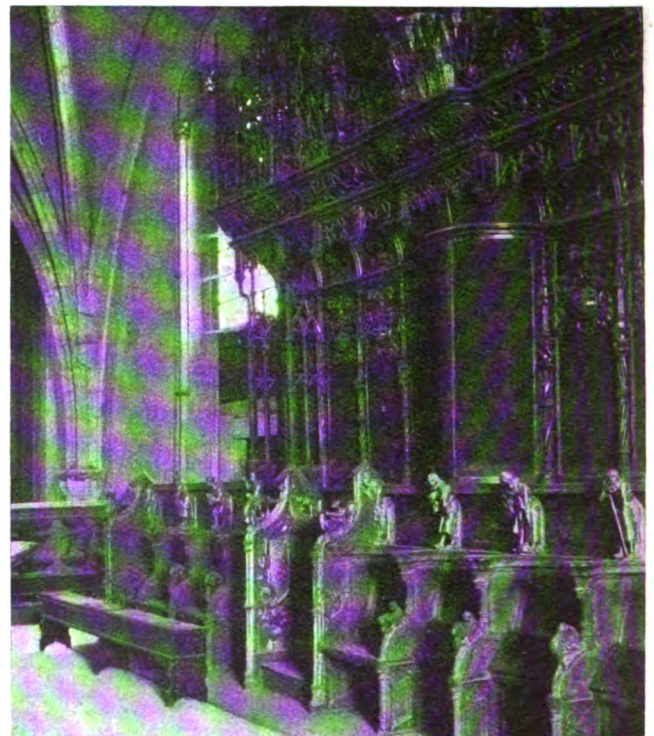
Not far from this, at the base of the hill on which the town is built, is the church of Sta Cruz, hemmed in by other buildings so that the only entrance is at the west end, the original Romanesque of which has been overlaid with



PULPIT, CHURCH OF STA CRUZ, COIMBRA.

an extravagance of late Gothic ornament in the peculiarly Portuguese, or Manoëlian, style of the early sixteenth century. The composition is further confused by a curious wind-screen, in the form of a pair of large oak doors in an eighteenth-century setting, which stands before the west door and some ten feet away from it, to some extent serving the purpose of a porch, but wholly disconnected from the building. Presumably the doors are opened on great occasions, but as a rule entrance is obtained on either side, down flights of stone steps from the raised street level.

Inside the church there is much that is of interest. Two great tombs in the chancel are fine examples of the Manoëlian style, dignified in outline and at the same



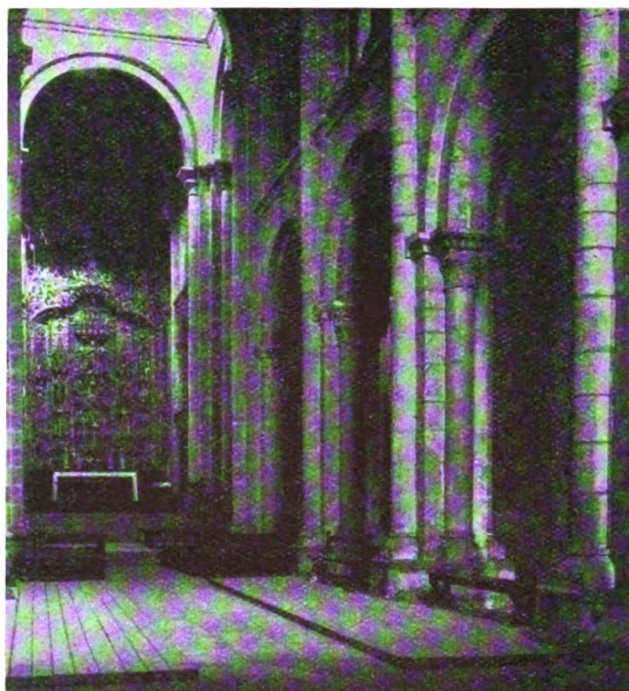
CHOIR STALLS, STA CRUZ, COIMBRA.

time rich with figure and foliage carving. But by far the most beautiful feature is the pulpit of a single stone, corbelled out of the north wall and reached by a hidden stairway behind it. It is of French workmanship of the François I. period—that is, about A.D. 1530—and its delicate perfection is enhanced by its setting in a tile-covered wall, whose colouring is by no means obtrusive, but sufficient to show up the plain stone.

Delicate late Gothic choir stalls, richly gilded and yet not overdone, are to be found in the west-end gallery. These are worthy of close study, and, although quite different, are yet suggestive of those in Henry VII.'s chapel at Westminster, with which they stand comparison. The foliage carving and tracery are of much the same character, the leaves being late autumnal, almost verging into winter; but the cresting is exceptional and very fine indeed, consisting of a series of pictures in carved and gilded woodwork of churches, castles, and ships, with representations of battles both on land and sea.

This church, like most in Portugal, was at one time conventual, and the cloisters are double, the lower ones open and the upper ones glazed; and the garth is laid out as a garden, with a fountain in the middle.

Somewhat higher up the hill is another church, Sé Velha, which is not merely equal to Sta Cruz, but in

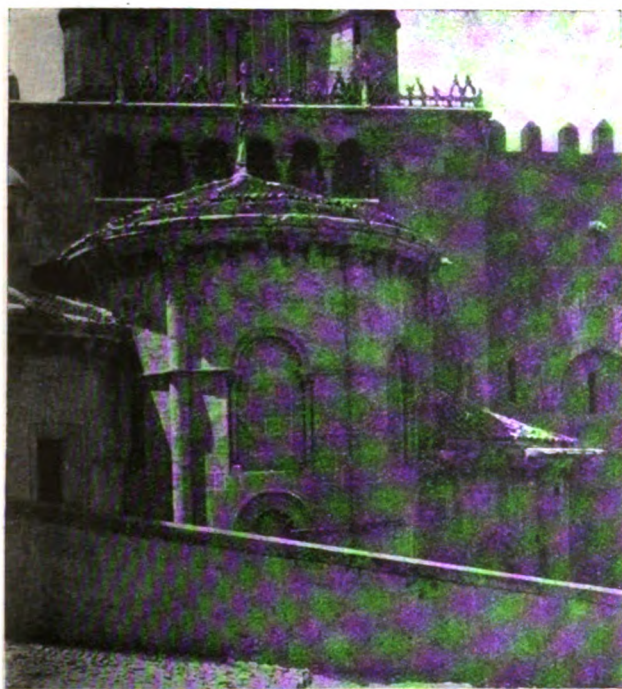


INTERIOR, SÉ VELHA, COIMBRA.

stone and solemn dignity of the nave, is wonderfully fine, nor is it detracted from by the occurrence, in the shadow of the aisles, of a series of altars, each with its rich reredos, of many different dates and styles, and each distinct and worthy: as also is the font, a fine specimen of Manoëlian stone carving.

At least one other church, do Salvador (the Jesuit church), deserves attention for its three great altars, at the east end and in the north and south transepts, each backed by a magnificent gilt rococo reredos rising to the roof, that at the east end containing a silver shrine set in a recess over the high altar. Also there are some well-sculptured tombs, especially that of D. Guiomar de Sá, and a font which vies with that of Sé Velha.

The most important civil building in the town is the university, situated on the crown of the hill. Planned round a great quadrangle, it has much dignity, the main

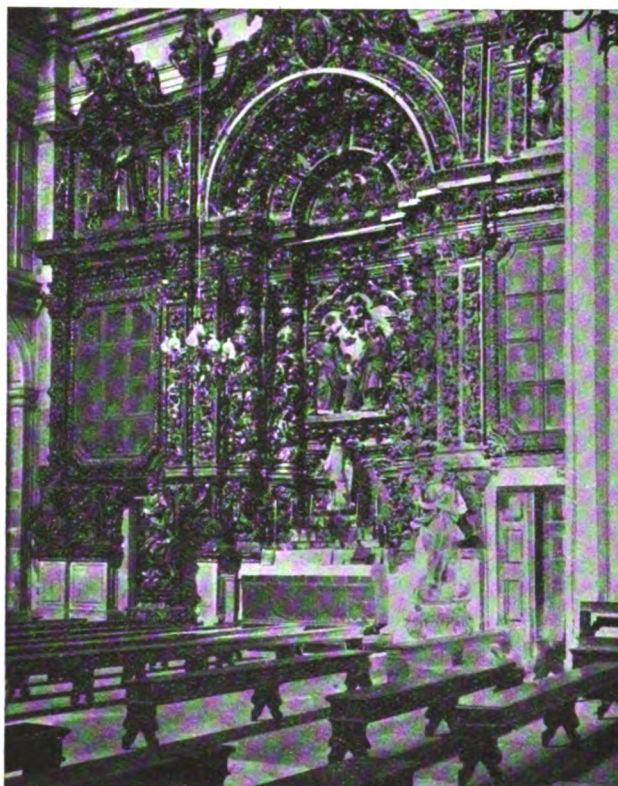


EAST END, SÉ VELHA, COIMBRA.

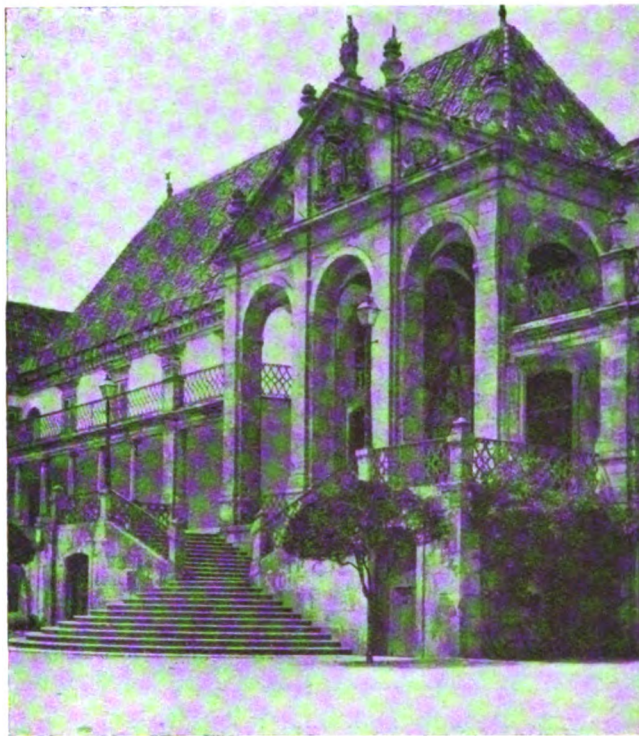
several respects even finer, retaining more of its original Romanesque character. The west end has the usual deeply recessed and semicircular headed doorway, and immediately above it, separated only by a corbelled platform, is a window of almost identical design, even to the nook shafts and their capitals. These are set in a projecting central tower, which, however, is not square, but is only about half as deep as it is wide, and in which the bells are exposed; and the whole front is battlemented as if it were a castle.

The east end also retains its Romanesque character, the apsidal terminations being similar to those of Ravenna—or of St. Hilaire at Poitiers. The tower over the crossing, however, terminates in a dome, and the whole composition, as viewed looking down from the steep lane to the east, is exceptional and extremely good.

Internally there is the full dignity of a Romanesque church, with a deep and well-lighted triforium and simple vaulting, closed by a tall late Gothic reredos, completely covered with gilding, which takes the place of an east window and hides the apses, giving the impression of a square east end. The effect, in contrast with the plain



EAST TRANSEPT REREDOS, SAN SALVADOR, COIMBRA.



MAIN ENTRANCE FROM COURTYARD, UNIVERSITY OF COIMBRA.

entrance being up a fine double flight of steps to an open Ionic loggia, broken in the centre by a great pedimented vestibule, open to the air and double the height of the loggia. It is an original scheme of considerable suggestional value.

There is, however, an even better courtyard not far away, belonging to the Museum Mercado de Castro, formerly the Bishop's Palace. Here the loggia is open, on the edge of a precipice and with magnificent views from it of the surrounding country; and it is of two storeys, the lower one of Doric columns carrying light arches, and the upper one of Ionic columns, unusually slender and raised on

pedestals, carrying an entablature and a pantiled roof. The external stairways to the upper storey, with open porches on the upper landings; the small caretaker's rooms at the foot; the flanking buildings, and the fountains in the court, itself laid out as a garden, combine to make a perfect composition.

To quote a guide, printed in English (?): "Coimbra is a city exelling in natural aspect and artistic magnificence monuments in profusion exist there, and it is a question which of them is the most striking and charesterical [*sic*] so its surroundings are incuded as it is situated on the river Mondego."



BALUSTRADE TO STAIRCASE, UNIVERSITY OF COIMBRA.

Cost of Building in London.

At this week's meeting of the London County Council, Colonel C. B. Levita, chairman of the Housing Committee, made an important and informative statement regarding the present cost of building houses and block dwellings in the County of London.

Submitting a report by his Committee on building tenders accepted during the summer recess, Colonel Levita remarked on the fact that, since the Council last met various statements had been made regarding the cost of building. It would, he thought, be of interest to the Council and to builders in the County of London to have the actual facts.

In a recent statement the Director-General of Housing had said that the cost of building at the present time exceeded by some 60 to 70 per cent. the cost of building in 1914. The National Federation of House Builders replied to that statement that, from their point of view, the cost of building was 125 per cent. over the cost in 1914. The actual fact was that prices based on contracts issued since the Council last met had revealed that the cost to-day was 80 per cent. above 1914 prices.

He was unable to hold out any hope to the Council that building costs in London were likely—immediately at any rate—to fall below the figure of 80 per cent. above pre-war level.

Assuming that 75 per cent. of the cost of building, including cost of materials, was accounted for by wages—and he was prepared, if necessary, to demonstrate that the figure was an underestimate rather than otherwise—it was evident that wages in the building trade had kept pace with the cost of building. There was no immediate likelihood of a fall in wages, since wage agreements had been entered into till March, 1923.

At a meeting of the National Federation of Building Trade Operatives held during the summer recess, the President laid

stress on the fact that there were 100,000 men in the building trade out of work, notwithstanding that a million houses were still required, and urged that it was the duty of the State and municipalities to go on building independently of costs. From the point of view of the public generally, he (Col. Levita) believed the Council would be anxious for the National Federation of House Builders to come in and ease the existing strain, but in view of their contention that building to-day was more than twice as costly as before the war, it was hardly reasonable to look to them for much help.

The contentions of the National Federation of Building Trade Operatives were fallacious from an economic standpoint. It was absurd to suggest that the gap between lack of productivity and economic price should be filled by the State. So far as he could see, there remained only one way in which building costs could be reduced, and that was by increasing the productivity per man. Employment, in the building trade especially, was determined by demand, demand was determined by price, and price was in a large degree dependent upon productivity per man.

Remarking on the tenders just accepted by the Council for block dwellings on the Brady Street area and the Tabard Gardens Estate, Colonel Levita said the actual cost per room was £165 and £175 respectively. The average pre-war price was £95. The pre-war cost per foot cube for block dwellings was 9½d.; to-day in the Brady Street tender it was 1s. 2½d. On another estate the pre-war cost per foot cube for cottages was 5½d., while to-day it was 9½d., which also showed an increase of 80 per cent.

Colonel Levita's assertions regarding the economic fallacy of low productivity per man and State subsidies were challenged by the Labour Party, but after further discussion the acceptance of the tenders was approved.

The Development of Building Estates.

Mr. B. W. Adkin, F.S.I., Vice-Principal of the College of Estate Management, discussed "The Development of Building Estates," at a large meeting of building and architectural students, at the Northern Polytechnic, London. He remarked that the Housing and Town Planning Act, 1919, made it compulsory upon every local authority to prepare a scheme for the development of all land in its district which was likely to be used for building and for the formation of streets and the erection of buildings thereon. All schemes must be made by December 25, 1925, and were subject to the approval of the Ministry of Health, who, as required by the Act, had already made regulations as to the procedure to be followed by the local authorities in preparing their schemes. These schemes would have an important effect on the development of building estates in the future. Some of the most probable results would be that streets would vary in width according to the requirements of the traffic; that the number of houses allowed per acre would be far less than it had been in the past for small and middle-class houses; that allotments and playgrounds and other open spaces might be a prominent feature; that less regularity of building would be in vogue, and that the general appearance of areas developed under the schemes would be more pleasing to the eye than the long streets of similar houses of the past. All that pointed to an endeavour to secure a more wholesome condition of life for the inhabitants, and owners of large estates, partly rural in character, would not be injured, as, although building land would no doubt be cheaper owing to the smaller number of houses per acre, more land would be developed for the same number of houses. The owner of absolutely ripe building land would no doubt suffer as his land would be likely to be less valuable, but it was a recognised maxim, he (Mr. Adkin) thought, that some individuals must suffer for the benefit of the community at large, and there might be cases where the development of a district on more open lines would make more distant land ripe for building, so that some people's land which might have been agricultural land for many years would become building land whereas otherwise it would not have been so. The development of building estates round London had had various eras of activity and depression which it was somewhat difficult to analyse. At one time a dearth of houses seemed to arise and estates developed rapidly. At another time there seemed to be a glut of houses, and a blight fell upon building estates, reducing everything to a standstill. Sometimes activity was general, at other times activity was local only. There was a period of activity in the seventies which he remembered came to a sad end in the early eighties. Many rash speculators were ruined, and in some parts horrible carcases of buildings were the most noticeable feature of the landscape for many years. Another period of activity commenced in the early nineties and continued more or less until it was checked by the threat and subsequent legislation as to land value duties. From that time until the outbreak of war, there were but few houses erected, and practically no new estates were developed in many of the London suburbs, although there was some continued activity in certain districts. After the war the demand for new houses of a certain class became abnormal, but prices were so high and labour so upset, that development by private enterprise was difficult. The Government took the matter in hand and developed a new housing policy on three main lines; firstly, the erection of houses by local authorities, the State bearing all loss beyond the proceeds of a penny rate; secondly, financial encouragement to public utility companies; and, thirdly, a cash subsidy up to £250 per house to the private builder. It was well worth while to see the effect of that policy. It had resulted in the erection of about 170,000 houses. The taxpayer would have to pay about £150,000,000 in respect of houses erected by local authorities. The public utility companies which were to be financially encouraged were on the verge of writing off the capital invested as a dead loss, and the private builders had pocketed £10,000,000, and they wanted more. These new houses which were known to many as "the Government houses," were to be found all about the country. He had found them in the middle of the mining areas of Wales and the Forest of Dean, and in some of the prettiest of our Sussex villages and other villages in the home counties. They could find these houses wherever they went, and he thought they would agree that they formed conspicuous objects on the landscape, and constituted a more or less lasting memorial to the housing policy of the Government. It now seemed fairly certain that the erection of Government houses would soon cease if it had not ceased already, that fancy prices must go, and that the development of building estates on business lines would soon begin again. He had known dozens of cases just recently where people had paid £1,500 or £1,600 for houses which in the old times could have been built for £500 or £600.

It was very difficult to estimate the rapidity with which an estate would develop. They were almost sure to estimate that it would develop much more rapidly than it actually would, and in consequence to estimate that the profit out of the estate would be larger than it eventually turned out to be. In his opinion, the most satisfactory method to a speculating builder was to buy the land, build upon it, and sell the buildings with the land freehold or to create ground-rents, sell the houses leasehold, and sell the freehold ground rents. By that means the builder turned over his money quickly, and obtained the best results possible in the circumstances. He took whatever profit there might be on the land and on the buildings, and he was not interfered with by the landowner or his surveyor, or his solicitor. The only person he had got to deal with was the local authority. But in order to adopt the course successfully the builder in question must be a person who was very strong financially, and further he must choose a district in which the houses or other buildings would sell readily at remunerative prices. It was very seldom that a builder was sufficiently rich to deal with large areas of land; if he was, probably he would not care about speculative building. It was only where large areas could be purchased that much profit was obtainable from the land, and therefore the average man must look to such profit as was obtainable from the buildings, whether he bought small areas of land and built upon it, or whether he took a lease of land belonging to another. He thought an axiom was that in all cases where profit was to be made out of speculative building it was essential the building should be erected cheaply. It was evident that if all the necessary sand and gravel were obtained from the site, and materials might be purchased at reasonable prices, and good and cheap labour was easily procurable, a builder could do much better than if he erected houses on a soil which provided nothing for the building, and which he required more expensive construction because labour or materials, or both, were difficult to obtain. The builder therefore wanted to be very careful how he selected land for building purposes. Where a builder took a lease of land he had the advantage of keeping his capital available for building operations, and he was able to make arrangements to get some little profit out of the land in addition to what he might obtain by building. In conclusion, Mr. Adkin gave an instance of how a speculating builder with a capital of £500, working on a fund provided by the landowner, could secure a satisfactory result to both himself and the landowner, the main points being a limited building fund, only a few houses in course of erection at the same time, and the sale of each house on its completion. He anticipated considerable development of building estates so soon as things settled down, and prices of labour and materials became reasonable (Applause).

Mr. R. L. Roberts, M.A., who presided, in proposing a vote of thanks to Mr. Adkin for his instructive and interesting address, said he had been a contracting builder for over 20 years. He knew nothing about speculative building, and he came there to learn how to make money out of it, but he had come to the conclusion he would rather be the landowner (laughter).

Mr. Adkin had said a speculative builder must build cheaply. That he (Mr. Roberts) always understood was the right thing to do. A builder built as cheaply as he did, and then found somebody to buy his houses and pay the cost of it. That had been what speculative building had too often meant, and he rather hoped that in the future there would be some improvement, and that it would be more strictly regular than in the past. He would gladly welcome its return on such lines, though he did not want them to run away with the idea that the great lack of houses had been due to lack of speculative building. He did not know when it would be possible to build houses cheaply, that was to say to build them so that the builder could get a fair return for his money. The error of the Government scheme was that it seemed to be imagined that nobody was going to pay for the houses. Of course, the taxpayers were paying for them, and as regarded those who were not lucky enough to pay taxes someone was paying for them. In his opinion they would not get building going again until it was going to produce an economic rent. He had come to the conclusion that the type of house costing about £1,500 could be built more cheaply.

Mr. Reginald S. Clay (Principal of the Northern Polytechnic) seconded the vote of thanks, which was supported by Mr. Richard Parry (Principal of the College of Estate Management) and Mr. H. J. Axten, A.P.I.B.A., and most cordially adopted.

Mr. Adkin, in replying, said the landowner was a man who took a certain amount of risk. He knew someone who bought some land 30 years ago at £1,000 an acre out of London, and it was agricultural land still.

Follies.—I.

By Charles G. Harper.

Anyone who has travelled much in rural England will have been particularly struck by the remarkable prevalence of the term "Folly" as applied by the country folk to buildings either of unusual appearance, of no apparent practical use, or in a state of desertion and decay. Buildings on hill-tops, eccentric towers, sites of deserted Roman villas, such as "Folly Farm" at Mildenhall, the location of the Roman station, *Cunetio*, near Marlborough, monuments in any situation, and even hill-top clumps of trees, are all, in their phrase, "Follies." The traveller who happens to be of a speculative turn of mind will find his curiosity greatly piqued to learn the story of many among these unusual buildings, or of those weird plantations which often loom so inimically upon the sky-line. A sinister romance often seems to belong to them, but generally it will be discovered that most have no story at all; or having once had one, it has been forgotten. An exception is found in "Faringdon Folly," the clump of Scotch firs planted by Henry James Pye, Poet Laureate, about 1775 on the crest of a considerable hill overlooking Great

interesting is without doubt the famous Triangular Lodge at Rushton, Northamptonshire, built by that fanatical symbolist, Sir Thomas Tresham.

It is a strange building, in a lonely situation, three-quarters of a mile from Rushton Hall, amid the solitary rides and the woods of lime trees and dense clumps of yews and aromatic box, whose peculiar acrid scent is aroused by brushing against the foliage.

Here Sir Thomas Tresham gave full outlet to his peculiar bent of mind. Not only is the Lodge triangular in plan, but it is also in three floors, and the figure "3" enters very largely into its every detail. There are three gables to each face, and even the central chimney is three-sided, and its pinnacle crested, like all the other pinnacles, with the trefoil badge of the Treshams. Symbolism resided, you see, even in the family name the fanatic inherited. He was born, in a sense, to the mystic "three." The intention was also that each side of the Lodge should measure, horizontally and perpendicularly, 33 feet 3 inches, and the lower stage almost exactly carries out the idea horizontally. If measurements do not exactly make it so, we may be sure that this is merely a builder's slight error.

The entrance is by a doorway with a carved hood bearing the Tresham arms and the inscription "Tres Testimonium Dant"—that is to say, "There are three that bear record." Round the frieze, on each of the three sides, is a Latin inscription, each one consisting of 33 letters. Thus: "Aperiantur terra & germinet salvatorem," "Quis separabit nos a charitate Christi," and "Consideravi opera tua Domine et expavi." These we can easily render: "Let the earth open and bring forth a Saviour," "Who shall separate us from the love of Christ?" and "I have considered Thy works, O Lord, and was afraid."

The gables bear mystic devices, except the centre one on each side, which carries a sundial. There you see a hen and chickens, with the figures "1641"; a seven-branched candelabrum and "3898"; the "Seven Eyes of God" and "3509"; the "Pelican in her Piety" device and "1626"; the "Dove and Serpent" and "1595"; the "Hand of God on a Globe" and "1590." Beneath the three sundials are the words "Respicite non mihi soli labore"—"Behold! not for myself alone have I laboured."

The meaning of those numbers has never yet been explained, nor has that of the figures "55.55" over the doorway.

Even the little supporting consoles beneath the entablature have each a letter. Read consecutively they form the phrase "Mentes tuorum visita"—that is, "Visit the minds



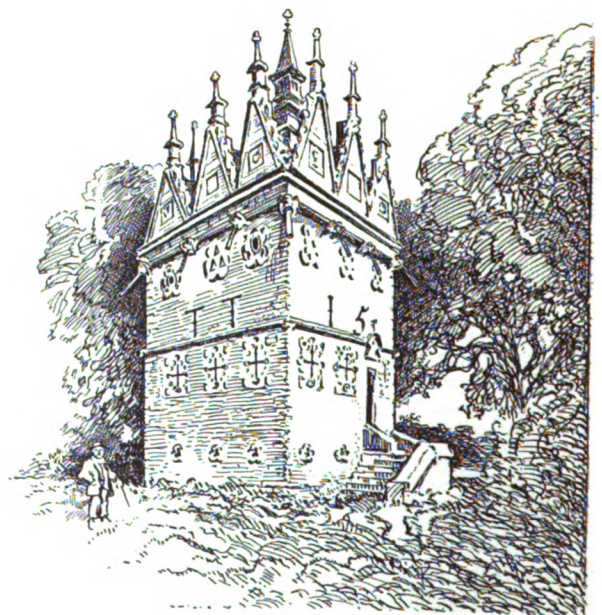
FARINGDON FOLLY.

Faringdon. The thrill that often plays upon our nerves in unusual situations and under certain conditions is doubtless a survival of that dread of loneliness and the dark which intimidates children and savages. Mr. Samuel Pepys experienced that when he found himself alone when night was come, not merely on Salisbury Plain, but in a strange and eerie place of vast earthworks which afterwards he learned to be Old Sarum. His natural curiosity—for Samuel was of an inquisitive nature—tempted him into that place; but, once there, he was frightened and glad to get away.

But what really is a "Folly," in the original sense of the word? It has nothing at all to do with foolishness, whatever may be the implication to-day. Does the rustic, when he points out some strange building and describes it as a "Folly," intend to criticise it or the motives that placed it there? Not at all; he calls it so because his father, his grandfather, and all the ancestors he ever heard of did the like. He accepts the term without any personal views. But in its origin "Folly" meant nothing more than a whimsical fancy. It is the French word *folie*, meaning anything you please, from a pleasant fantasy in the shape of a garden-house or gazebo to one of those sky-line freaks already instanced.

But at the same time it is well to note that quite early there came the secondary meaning of foolishness and futility. In 1228 the great Hubert de Burgh, Grand Justiciar of England, began to build himself a castle, or a pleasance, in the Welsh Marches, that borderland between England and Wales which was then, and for long after remained, a disturbed and dangerous region. He called it his *folie*. Before it was quite finished the place had to be destroyed, as part of the terms of a new treaty concluded with the Welsh. Satirists declared it to have been a "Folly" in the English sense of the word; but as the only satirists of that time who could write were monks, who wrote habitually in Latin, they chose to call it the same thing in classical language: "*Stultitiam Huberti*"—"Hubert's Folly."

Well, now, we have settled the nature of follies. The next thing will be to find some. This will not be difficult. The land abounds with them. Architecturally the most



THE TRIANGULAR LODGE, RUSHTON.

Lodge
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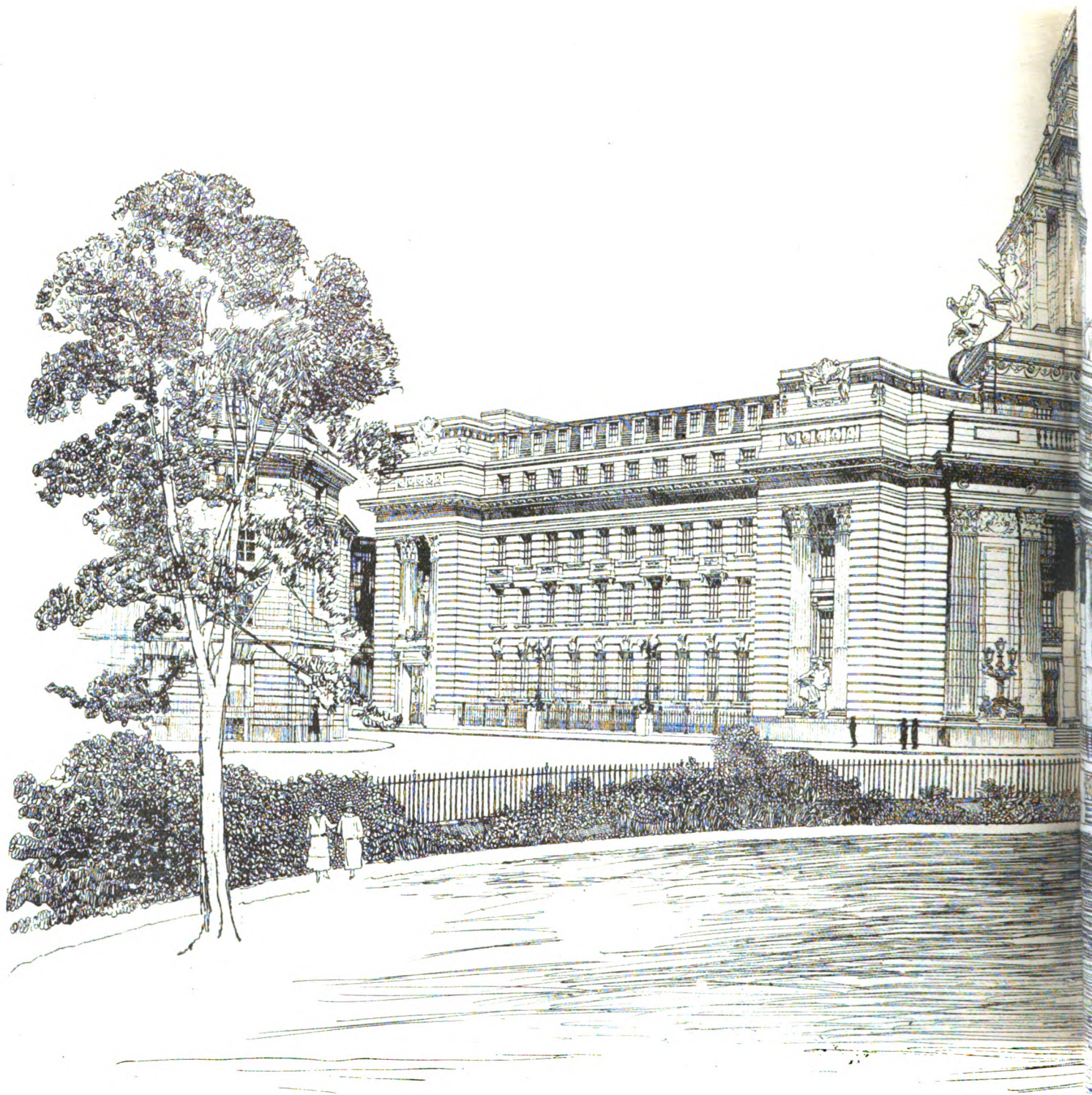
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PORT OF LONDON AUTHORITY BUILDING
EDWIN COOPER

EST. OCTOBER 20th, 1922.



PHOTO-LITHO. SPRAGUE-HAYCOCK-PRINTERS LTD. 69 & 70, DEAN STREET, LONDON, W.1.

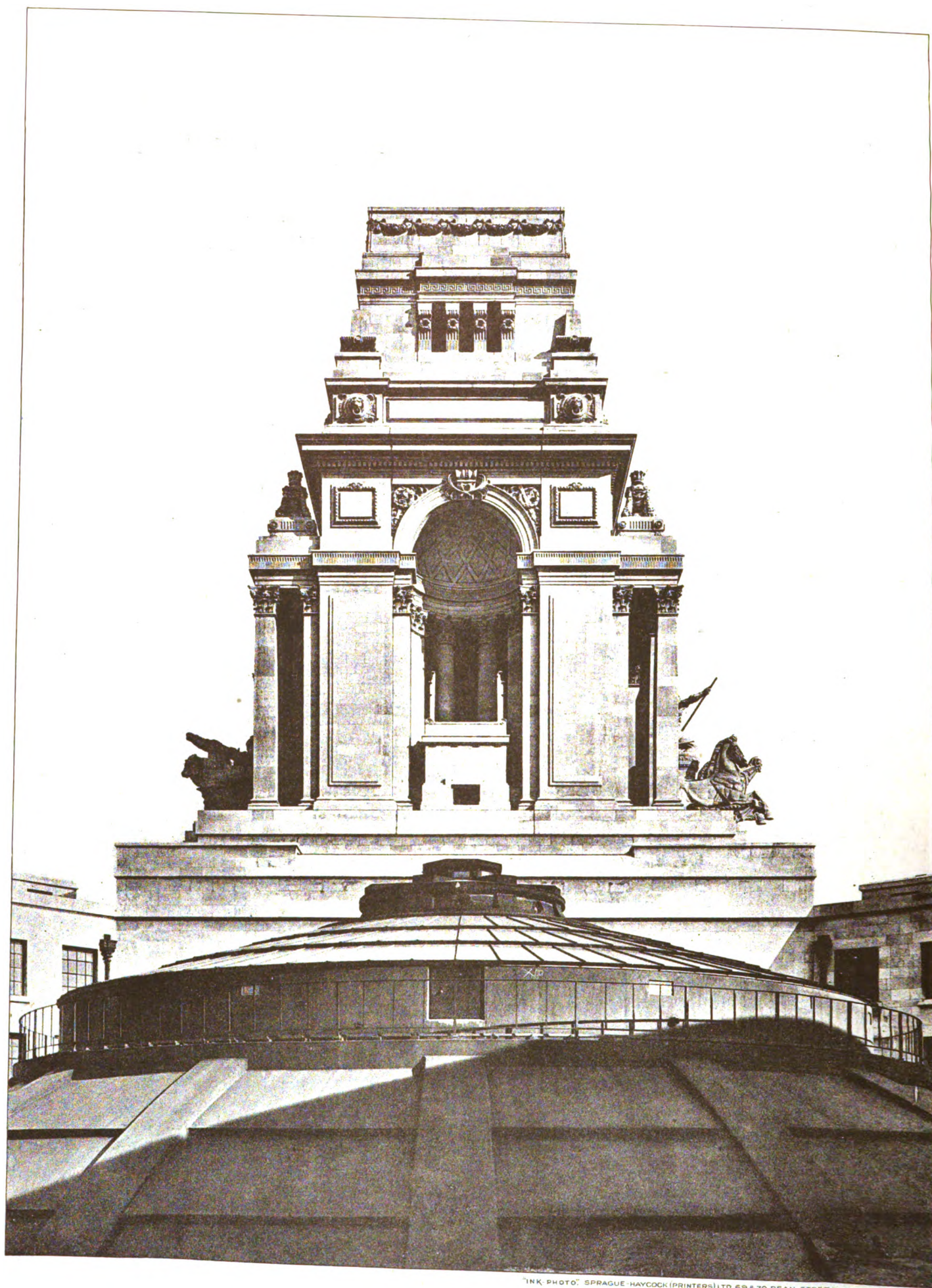
VER HILL, LONDON; GENERAL VIEW.
ARCHITECT.



"PRODUCE" GROUP.

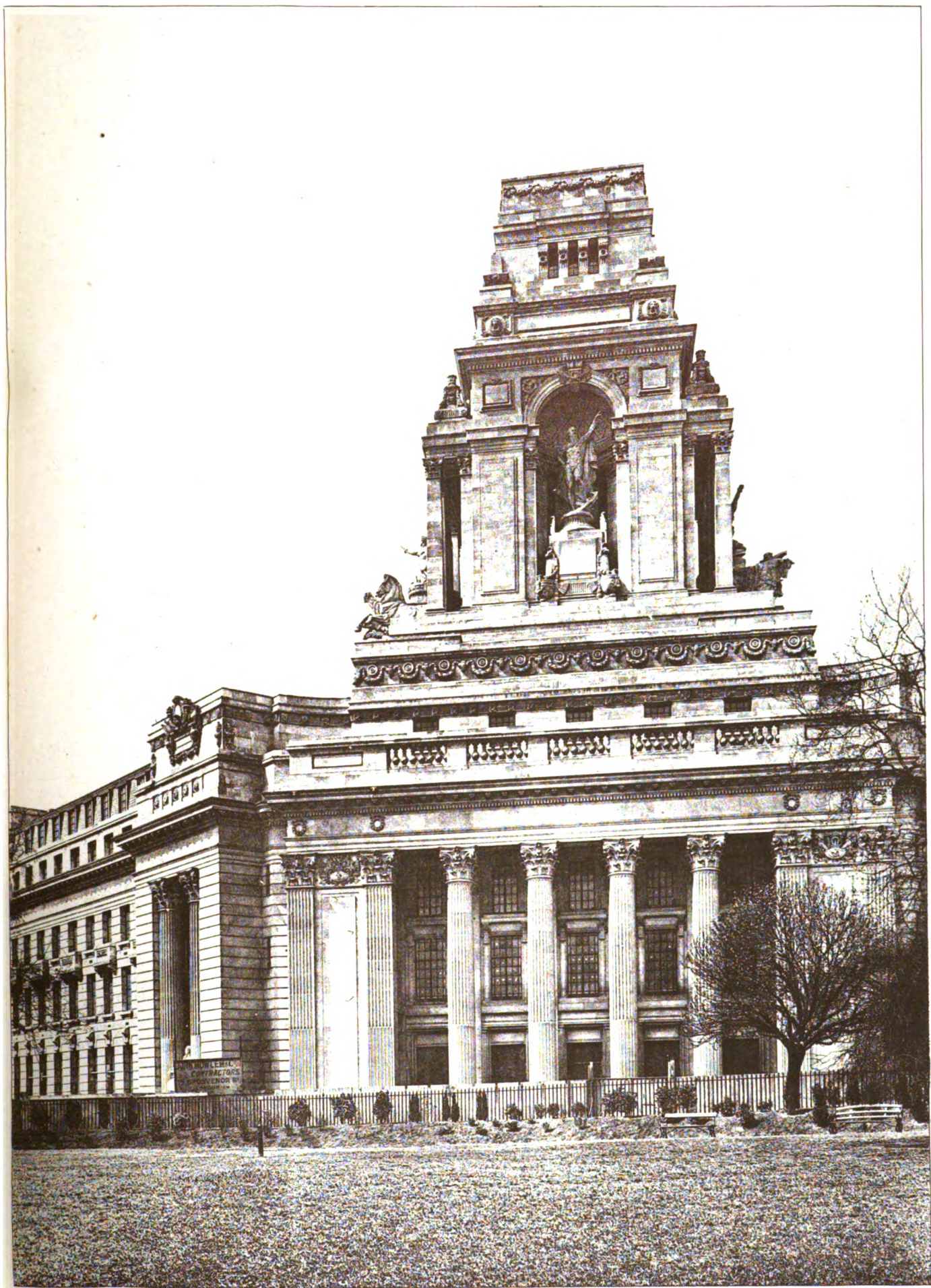
FROM A SKETCH MODEL BY THE LATE ALBERT H. HODGE, EXECUTED BY CHAS. L. R. DOMAN, R.B.S.

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BACK OF TOWER AND DOME.



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MAIN FACADE FACING TOWER HILL.

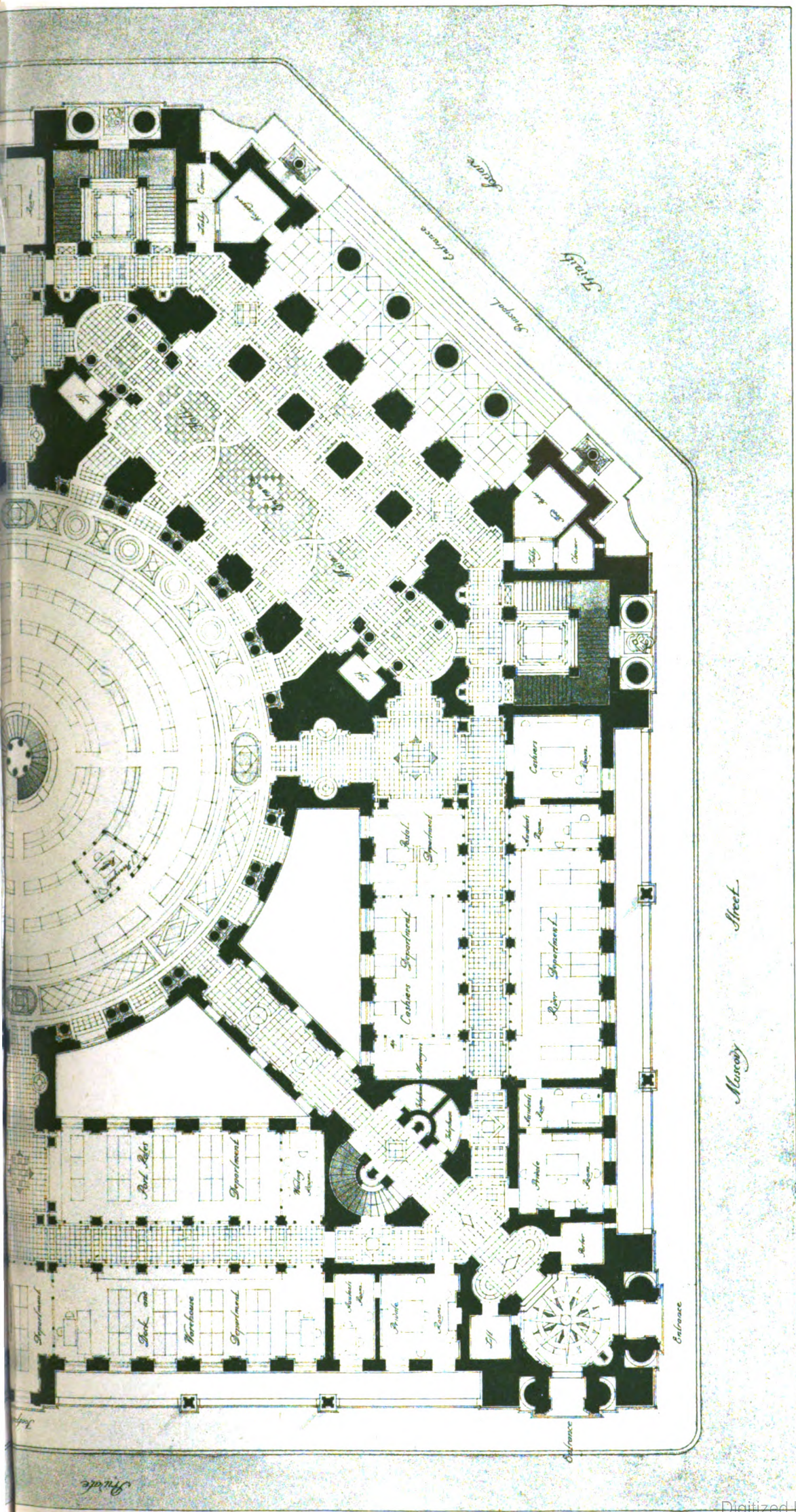


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"EXPORTATION" GROUP.

FROM A SKETCH MODEL BY THE LATE ALBERT H. HODGE, EXECUTED BY CHAS. L. R. DOMAN, R.B.S.

This is a detailed architectural floor plan of the University of Toronto, showing various departments, libraries, and a large circular auditorium. The plan is oriented with the main entrance at the top. Key areas include the Registrar's Department, Law School, Medical Department, and a large circular building on the right. The plan is labeled with 'Entrance' at the top and 'Auditorium' on the right. The drawing is in black ink on a light background.



"INK PHOTO", SPRAGUE HAYCOCK (PRINTERS) LTD. 69 & 70, DEAN STREET, LONDON, W.1.

PORT OF LONDON AUTHORITY BUILDING, TOWER HILL, LONDON ; GROUND FLOOR PLAN.
EDWIN COOPER, F.R.I.B.A., ARCHITECT.

of Thy people"—while each of the angel gargoyles has a letter on its breast, and shields beneath reveal others. These run round the building: SS. SD. DS. QEE. QEE. QVE." They form the initials of

"Sanctus Sanctus Sanctus Dominus Deus Sabaoth
Qui Erat Et Qui Est Et Qui Venturus Est."

"Holy, Holy, Holy, Lord God of Sabaoth, which was, and is, and is to be."

Not even the chimney is without these adornments. It bears the inscription "Esto mihi ecce salus," "To me be it. Behold. Safety." The iron ties that bind the building through are finished off ornamentally to form "T. T. 1593," giving Tresham's initials and the date of building.

The Triangular Lodge is thus the supremest example of those freakish buildings which the country folk call "follies." It can have had no real purpose beyond that of satisfying the mystical fancies of Sir Thomas Tresham, for the idea that it can have been intended as a hiding-place for Roman Catholic priests is too fantastic to be entertained. A building that always invited curiosity and comment would have been, naturally, the very last kind of place in which to secrete anyone; and although it has

attempt to typify the Trinity was evidently a person much in the same way of thinking as Tresham. He was grandfather of the famous wit and satirist, Dean Swift, who in



FOLLY GATE.

his autobiography alludes to his ancestor's freak and says: "Its architecture denotes the builder to have been somewhat whimsical and singular, and very much towards a projector."

The Rev. Thomas Swift died in 1656, weighted with the troubles that beset loyal folk in those turbulent times of civil war. He was a devoted Royalist, and therefore a marked man—so marked, indeed, that his odd house is said to have been pillaged no fewer than twenty times by the Parliamentary troops, who also raided his cattle. It must have been ill-gleaning on the twentieth occasion!

As already remarked, everyone, save those in and around Goodrich, knows of the "Tripod House"; but there, if you seek it by that name, you will never find; because, being the oldest building anywhere near, except, of course, the church, it is called "New House"; or, alternatively, because the stone of it is grey, with some few remains of a once plentiful whitewash, "White House." Ask, traveller, if you wish readily to find it without the necessity of quartering the neighbourhood, for "The Kennels." Then shall you discover, in a rugged, rocky field in a hollow almost within sight of Marstow Church, this considerable old dwelling. "The Kennels" adjoin. They are those of harriers. When the hounds see the stranger, they give tongue to such a degree that it is quite impossible to hold any conversation while that welcome lasts. It is a welcome, because they think they are about to be fed; or, at the very least of it, to be taken out for a run. When these joyous expectations are not fulfilled, the noise at last dies down, and it becomes possible to hold some conversation with the farm labourers who now inhabit the place.

In Goodrich itself there are other evidences of Sir Samuel Meyrick's mediæval predilections. There stands what is called the "Old Lock-up." This is a century-old building of sham fifteenth-century style, called "Y Cruwyr," and bearing an heraldic shield of eleven martlets, adjoining the equally bogus-antique inn called "Ye Hostelrie."

But we have not done with the Goodrich curiosities. In the churchyard a huge ice-borne boulder, carried whence in the glacial drift, ages ago, no one knows, is used as a tombstone; and, in the literary way, the courtyard of Goodrich Castle is to be noted as the spot where Wordsworth met the little girl whose talk suggested to him his morbid poem, "We are Seven."

A modern curiosity in house-building is found at Sidmouth, South Devon, where the ancient parish church was rather wantonly rebuilt in 1859. The stones of the most sacred part of the church, the chancel, were sold for the building of a singular-looking villa close at hand, named from this circumstance "The Old Chancel." In this connection it is well not to forget that Fountains Hall, in Yorkshire, was built of stones from Fountains Abbey; nor that Alderbury House, some three miles from Salisbury, a plain stone structure, built about 1790, owes its materials to the stones of the campanile of Salisbury Cathedral, demolished by that vandal, Wyatt.



THE TRIANGULAR LODGE, RUSHTON.

certainly one fireplace, it is not and never could have been suitable for living in. It has no windows, save the unglazed triangular openings in the trefoiled devices.

There is, near the road to St. Albans, at the entrance to Brookmans Park, a curious gateway well known in that locality as "Folly Gate." It is said to have been built by that Sir Jeremy Sambrooke who in 1740 set up the obelisk, the familiar "Hadley Highstone" on Hadley Green, north of Barnet. It is also said to have been built to commemorate a visit of Henry VIII. to Brookmans. It cannot have been both, and it is evidently much older than the eighteenth century. The Hertfordshire rustics have a rooted idea that a farthing is laid between each of the bricks of which this elaborate castellated structure is built. It is, of course, a weird fallacy; but may we not trace the origin of it to a confusion of thought and a dim sort of knowledge that the cost of bricks was round about a farthing apiece?

There remains at Goodrich, in Monmouthshire, a strange dwelling called the "Tripod House," built in 1636 by the Rev. Thomas Swift, vicar of Goodrich. His initials and the date still appear on it. "Tripod" is a term by which the folk of that village attempt to describe the ground-plan, which is that of a central hall whence three wings radiate equidistant. The author of this whimsical



THE "TRIPOD HOUSE," GOODRICH.

Beside the road, too, at Alderbury, is that strange ecclesiastical-looking residence, "St. Mary's Grange," built by Pugin, and one of the supposed originals of "Pecksniff's House" in the neighbourhood of Salisbury.

In "Gatton Town Hall" we have a "Folly" of a sardonic kind, set up by one who was intent upon satirising the electoral conditions of the age. There is no other conclusion to be drawn, although the builder of it was the one who profited by those conditions. Gatton, near Reigate, was never a populous place, and it remains something of a mystery how it became a Parliamentary borough in 1451. Never did the qualified electors exceed twenty, and they were always tenants of the lord of the manor, or persons employed by him. Gatton was one of the notorious old "rotten boroughs," whose representation, by two members, was swept away by the Reform Act of 1832. It was in 1830 that Lord Monson purchased Gatton,



THE "OLD CHANCEL," SIDMOUTH.

for as much as £100,000, solely as an investment in bribery and corruption. Two years later Reform had abolished his "vested interests." In front of his great mansion in Gatton Park he built a "Town Hall" for the non-existent town, and there it is to-day, a little temple-like structure bearing the motto, strange indeed under those circumstances, "*Salus populi suprema lex esto*," together with other Latin inscriptions to the effect that no votes sullied by bribery should be given.

Before Lord Monson's time Gatton had been purchased by Mark Wood, Esq., who soon afterwards was created a baronet. It was then recorded that the "borough of Gatton" contained six houses and only one freeholder—Sir Mark Wood himself. The other five houses he let by the week; and thus, paying the taxes and all outgoings, he was the only elector of the two representatives. At the election he and his son Mark were the candidates, and the father elected himself and his son!

A prime curiosity, of a gruesome kind, is to be found in the park of Pentillie, on the river Tamar, in Cornwall, the seat in the seventeenth century of that evil figure, Sir James Tillie, who named the place after himself. Born at St. Keverne in 1645, in humble life, he entered the service of Sir John Coryton, Bart., of West Newton Ferrers, and

eventually became steward of his estates. In 1680 the baronet died. Meanwhile Tillie had grown pretty well to do, and had married the daughter of Sir Harry Vane, who brought him a fortune. At the death of Sir John Coryton, Tillie was a widower. His late master had arranged that he should act as steward to his eldest son and guardian of the other children. It was not long before that eldest son died, and Tillie married the widow. In the succeeding thirty years he seems to have become undisputed owner of his late master's property, and he built a mansion which he called "Pentillie Castle," and in 1680 secured the honour of knighthood. He died in 1713, leaving no children, but willed his estates to his nephew, James Woolley, on condition he should assume the name of Tillie.

Cornwall is a land of the marvellous, and it is not

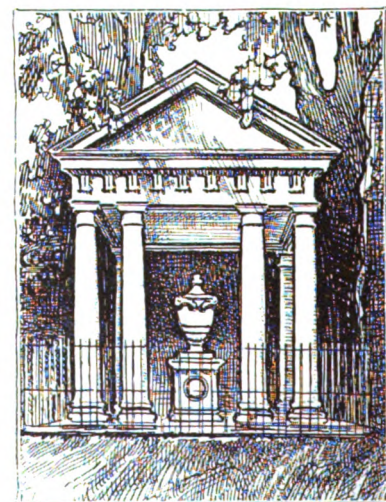


ALDERBURY HOUSE, BUILT FROM THE STONES OF SALISBURY CAMPANILE.

surprising that the worst construction has been placed on Tillie's career. He is said to have poisoned Sir John Coryton the younger, and to have been a coiner on a large scale. It is certain that in 1687 the College of Arms revoked the arms granted him, and fined him £200 for false statements. His will contained some strange provisions; among them instructions for building a tower, to which his body was to be taken, clothed as in life, with hat on, seated in a chair, and set in a room furnished with pens, ink and paper, and his books. In addition there was to be a seated stone statue of himself. He is supposed to have declared he would come again to life within two years.

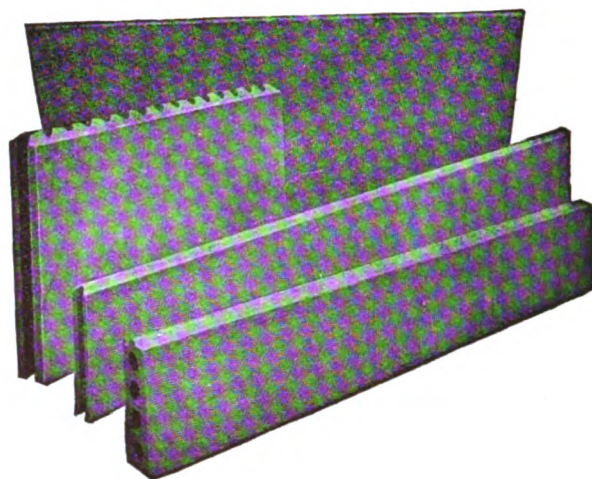
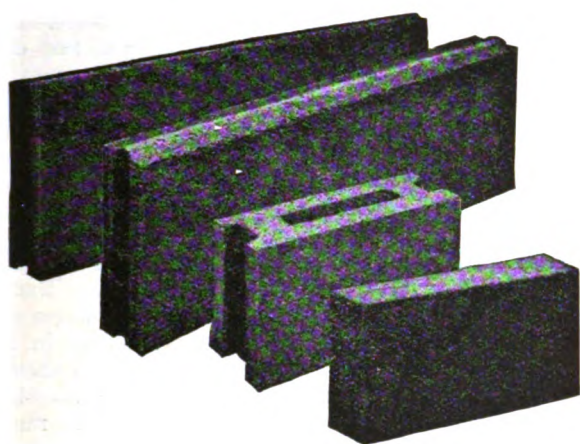
This tower is still to be seen in the grounds of Pentillie, ivy-grown and dilapidated. The upper floor, with the dressed and seated body, fell many years ago, but the lower room is to be seen through a spy-hole; and there the statue is yet, that of an under-sized and ferociously ugly man, with scowling countenance and great protruding paunch.

A more kindly person was the eccentric Mr. Hull, who died in 1772, and by his own desire was buried beneath the tower on Leith Hill which he had built in 1766. A



THE "TOWN HALL," GATTON.

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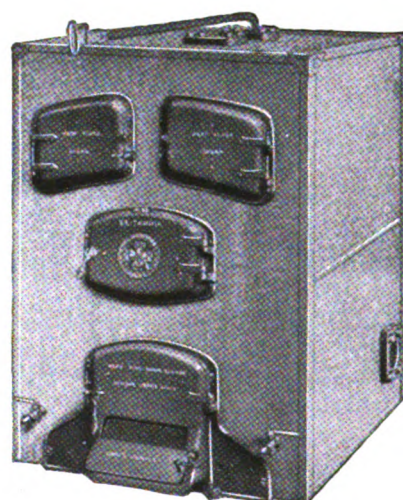
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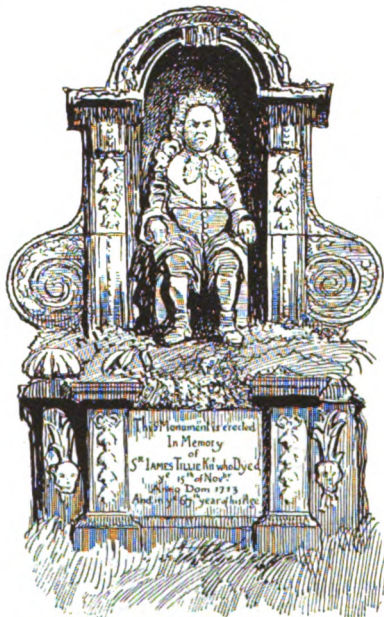
William Macleod & Co., 60-64 Robertson Street, Glasgow.

tablet on that building tells us that "he lived the earlier part of his life in intimacy with Pope, Trenchard, and Bishop Berkeley. He at last retired to Leith Hill Tower,



ENTRANCE TO SIR JAMES TILLIE'S MONUMENT.

where he led the life of a true Christian and rural philosopher." A Latin inscription states further that he erected the tower not only for the benefit of himself, but for the public good.



SIR JAMES TILLIE'S MONUMENT.

From Leith Hill Tower you look southward, across the Weald of Surrey and Sussex to where, through that notch in the South Downs, "Shoreham Gap," the waters of the Channel are glimpsed.

(To be continued.)

The report of the Auditor-General on the accounts and balance-sheets of trading or commercial services conducted by Government departments during the period ended March 31, 1921—including in some cases accounts from the beginning of operations undertaken during the war and down to that date—was issued last week. The home-grown timber balance-sheet of the Board of Trade showed a loss at March 31, 1921, of £5,824,823, of which £1,605,479 was due to road damage, etc. Sales to Government departments at reduced rates caused a loss of £450,000. Through the fall in prices in the timber trade, a profit of £1,562,042 on the imported timber account is expected ultimately to be wiped out, contract prices for sale of stock having had to be modified.

The Value of Architectural Models of Buildings.

The art of reading and drawing correctly is an acquired and difficult art; it is, in fact, the creation of value of light and shade; and even the most imaginative thinker in the solid will find the model a key to minor aspects and problems of house building.

Their value was early recognised by the architects of the Italian Renaissance; the Pitti Palace was first constructed in miniature, and Michaelangelo experimented on the models of the dome of St. Peter's. In France, Félibien mentions that a model of Chambord, four feet long, was in existence in his day, though it was at that time much decayed; and in the building accounts of Louis XIV. there are several entries of payment for models for buildings to *menuisiers* or cabinet makers, who took their instructions from architects.* A large model of Versailles and its gardens and waterworks† was exhibited at Exeter Change in 1687, made of copper and gilt with silver and gold. The same practice prevailed in England in the later Renaissance. In 1669 Alderman Backwell showed Pepys the model of the houses which he was about to build on Cornhill and Lombard Street;‡ Wren's model for the rejected scheme for St. Paul's is preserved at the Cathedral, but after the warrant design of May, 1765, he resolved to make "no more models, or publicly expose his drawings which (as he had found by experience) did but lose time and subjected his business too many times to incompetent judges." The practice of submitting the designs and model of important buildings still, however, continued; Vanbrugh, writing in the winter of 1699, speaks of the Duke of Devonshire's absolute approval of the Castle Howard plans; and at a time when William III. had many cases pressing on his mind he took a great interest in this building, of which a model in wood was prepared "to travel to Kensington, where the King's thoughts upon't are to be had."§ Contemporary models which are interesting as illustrating the original condition of the actual building they represent in miniature, and minute variations between the actual structure and model are preserved in the Radcliffe Library, Oxford, Uppark, in Sussex, and Heveningham, in Suffolk, and the Register House, Edinburgh (now the Royal Scottish Museum).|| If further historical justification of the practice of model making is needed, we have the recommendation of Sir John Soane and minor men of the late eighteenth century. Soane suggests that the model should not be too small, but of "sufficient magnitude to show the several parts of each floor, free from colouring, which only deceives the eye and diverts the attention from scrutinising the component parts; the situation, forms, and connections of the several apartments may then be distinctly viewed."¶

The case for models is again enforced by Richard Elsam in his "Essay in Rural Architecture," where he points out that, however useful perspective drawing may be to architects, "there are but few persons that comprehends (*sic*) every part of a building from a drawing in perspective so well as a model."** "I would therefore," he adds, "recommend one or two of these expensive toys to the consideration of gentlemen rather than beguile their understandings with captivating and delusive drawings." An author of the late eighteenth century, who wrote under the pseudonym of Maepacke, advises a model to be made to a scale of at least a quarter of an inch to a foot, with each storey contrived to be removable. He carries the use of the model further than any of its advocates, even suggesting that blocks of wood should be made to scale for

* R. Blomfield, "A History of French Architecture," vol. 1, p. 47.

† Malcolm, "Manners and Customs of London." The dimensions were 24 feet by 18.

‡ "Diary," April 12, 1669.

§ "Court and Society in the Reign of Queen Anne."

|| Illustrated in Swarbrick, "Robert Adam," p. 263.

¶ "Plans, Elevations, etc., of Buildings Erected in the Counties of Norfolk, 1788," p. 16.

** (1803), p. 24.



AUSTRALIA HOUSE.
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Architects.

From an original Etching by
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the principal articles of furniture, such as beds, tables, and chairs, "the placing of which in the apartments of the model, with the ladies' assistance, will be of considerable use in judging of the conveniences of the design." * The just proportion and rational adaption of furniture of the eighteenth century to the rooms for which it was originally made must owe a debt to the serious consideration of the size and position of each piece in relation to the room. It is significant that there is silence, after this period, on the subject of the advantages of the concrete architectural model, and the delusive appearance, to the layman, of the abstraction of the architect's drawing; yet the advantage of the model, before the wholesale rebuilding of main thoroughfares in London and New York, which are to a great extent a public possession, cannot be overestimated to-day. The decline from Regent Street, the coherent unity as left by Nash, to the chaos of modern individualism might have been prevented if the proposed thoroughfare had been "built in little" and subjected to capable public criticism. For the defects of the scheme, as it now begins to take shape, are obvious to the passer-by, and could have readily been avoided. J.

Trade Notes.

Sliding bolts and spring window fasteners have been found out long ago so far as their protection against burglary is concerned. There are many alternatives to choose from. The latest, and one of the most promising we have seen, comes from the Nigate Door & Window Latch Co., 27 Bective Road, Forest Gate, E.7. "Nigate" latches are very simple, neat, and effective. They need consist of no more than two pieces, namely, a slotted member, which is screwed flush with the face of sash or jamb, and a rotatable member which engages with the other. They are produced in as many as fifteen sizes and three finishes, and are sold at prices competitive with latches, bolts, or fasteners now on the market.

General.

Alterations and additions are being made to the St. George's Hotel, Cliftonville, Margate.

Mr. Joseph Ward, of the Briars, Holderness Road, Sutton, Yorks, retired builder, left estate valued at £47,907.

Stratford-on-Avon Town Council last week discussed a town-planning scheme, particulars of which appeared in "The Architect," and deferred action till a future meeting.

Hampton District Council has been informed by the Minister of Health that he agrees to the suggested conversion of Garrick Temple (named after the actor who lived in a cottage near by) into a dwelling-house.

The list of tenders is published for the new school to be erected at Welling for the Kent Education Committee, Messrs. Cox Bros., of Maidstone, Kent, whose tender was £12,313, being recommended for acceptance.

Mr. Starkie Gardner has received a letter from the King and Queen expressing their Majesties' admiration of the design and workmanship of the wrought iron gates and screen erected by him to enclose Holyrood Palace, and regretting his inability to be present at the dedication ceremony.

All engineering craft demarcation questions having been satisfactorily settled, the extension of the Walthamstow Public Baths at a cost of about £13,000 is to be proceeded with forthwith. Mr. Thos. Shillitoe, of Seven Sisters Road, N.7, is the contractor, and Mr. J. Williams Dunford, of Walthamstow, is the architect.

The Ministry of Health have written the Newark Council sanctioning a loan of £30,000 for the sewage disposal works and sewers. This follows a loan of £25,000, for sewers, already sanctioned. The engineers to the scheme are Messrs. W. H. Radford & Son, of Nottingham, acting in conjunction with the Council's Surveyor, Mr. J. W. Hipwood.

Subject to the approval of the Ministry of Health, the Bolton-on-Deane Urban Council have accepted a tender of £28,830 from Messrs. Firth & Whittington, Ltd., of Doncaster, for the erection of a further 78 houses—12 of the A2 type at £360, 48 of the A3 type at £355, and 18 of the B3 type at £415. The Council decided also to accept the same contractors' tender of £1,105 for road making and sewerage in connection with the building of the houses.

The Scottish Board of Health has authorised Greenock Corporation to accept the tenders for the erection of 84 houses at Upper Cornhaddock. Work will be started almost immediately. The principal contractors are Messrs. M'Bride & Son, Port-Glasgow.

Lord Derby, speaking at Liverpool on the 10th inst. to members of the Merseyside Co-ordination Committee, spoke of the importance of closer communication between the two sides of the river. The question of a bridge or tunnel had been discussed, and a report would be received from two distinguished engineers, which would show the cost and enable the municipalities to say whether they were prepared to carry out the scheme.

Messrs. Knight, Frank & Rutley announce that they have sold privately the large building site situated at the corner of Wellington and Waterloo Streets, Glasgow. The property, which is diagonally opposite the Alhambra Theatre and only a few yards from the Central Station, has been acquired by a Glasgow syndicate for the erection of a substantial hotel on modern lines. It is understood the architect is Mr. W. Inglis, I.A.

A deputation from the Society for the Protection of Ancient Buildings met Sir Robert McAlpine last week and urged the preservation of the arch of old London Bridge discovered on the site of the old Pearl Assurance building six months ago. Sir Robert McAlpine, for Sir Robert McAlpine & Sons, who are erecting new offices on the old site, said that no funds were available for preserving the arch, and the demolition must begin.

A meeting of the Council of the Incorporation of Architects in Scotland was held at 117, George Street, Edinburgh, Mr. T. B. Marwick, the president, in the chair. It was decided to set aside for education purposes £5,000 out of the money bequeathed by the late Sir R. Rowand Anderson, and it was remitted to the Education Committee to draw up a scheme of bursaries and scholarships to be met by the annual income of the capital fund.

As a result of a ballot of members of the Scottish National Operative Plasterers' Federal Union, it has been decided by a majority to accept the employers' offer, which was in the following terms: "That the men resume work at the standard rate (present A grade, 1s. 8d.), and that the said standard be stabilised for the period to January 1, 1924." The strike has been in progress for fifteen weeks, and between 500 and 600 men have been involved. Work was resumed last week.

A development has taken place in regard to the historic bridge at Shrewsbury, the need of widening which has long been under the consideration of the local authorities and the Ministry of Transport. The county surveyor has drawn up plans for a new bridge, thus cancelling the necessity for any interference with the English bridge and spoiling its grand architecture. The new proposal has now to be considered by the Shrewsbury Town Council.

Since 1840 Dawlish Parish Church has been known by the name of St. Michael, but it has recently been discovered that this is entirely erroneous. The church was dedicated to St. Gregory (Bishop of Rome in 509 A.D.), and is one of the five churches in Devon dedicated to him. The vicar has been informed by the Ecclesiastical Commissioners that in all ancient documents the church was called St. Gregory's until about 1840, and that no authority for the change can be discovered.

At the last meeting of the Hereford City Council it was reported that the Ministry of Health had refused permission to erect further houses under the assisted housing scheme for the purpose of finding work for the unemployed and meeting the shortage. Seven tenders had been received for building without State aid, but these were too high to permit of economic rents being charged, and the Council had now asked the city surveyor to prepare plans of a cheaper type of house.

The Institution of Heating and Ventilating Engineers have recently acquired new and larger offices, at 38 Victoria Street, S.W.1. The membership of this Institution continues to increase, and the sphere of its activities is extending. A number of committees have been appointed by the Council, such as Research, Boiler Rating, District Heating, Fan Standardisation, etc. It is hoped that the labours of these committees will be of great benefit as regards technical matters, not only to the members of the Institution, but also to all connected with heating and ventilating.

In demolishing old buildings in connection with an improvement scheme at Barnstaple, a fine old plaster ceiling has been discovered of the quatrefoil design, with a centre drop, ornamented with floral decorations. The ceiling has been carefully removed, and is to be placed in the entrance lobby to the Guildhall. Also discovered, cased up, is a splendid oak door and framing, the door being worked out of the solid, and having attached original mediæval hinges known as cock hinges. The hinges are to be presented to St. Anne's Chapel, which will be fitted up as a museum.

* "Oikidea," p. 56.

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The Rent Restrictions Act.

We are sorry to see that the Committee appointed by Sir Alfred Mond and the Right Hon. Robert Munro,

"To consider the operation of the Increase of Rent and Mortgage Interest etc. (Restrictions) Act, and to advise what steps should be taken to continue or amend that Act,"

has made a report of which the following is the gist :

"We are of opinion that protection of tenants against eviction and unreasonable increases of rent, as afforded by the Increase of Rent and Mortgage Interest (Restrictions) Act, 1920, should not be withdrawn when that Act expires in June, 1923.

"We have, however, formed the opinion that in future legislation regard must be had to certain matters in the light of experience of the present Act. Among these are the questions of the further period of protection, of sub-tenancies, of the eviction of proved undesirable tenants, and of the owners of one house required *bona fide* for the owner's occupation.

"Upon these and other matters time has not afforded us the opportunity of making precise recommendations.

"Some of our members desire for the present to reserve their judgment upon the point whether or not the upper rental limits of the houses to which the present Act applies should remain unaltered."

The following members of the Committee (Sir Henry Norman, chairman, the Hon. A. Shaw, Major D. Watts Morgan, Sir J. S. Harmood-Banner, Sir Aubrey V. Symonds, Sir Edward Bray, Sir Theodore Chambers, Thomas White, Major P. B. Malone and Duncan M. Graham) sign the report; while Lord Eustace Percy and Lt.-Col. G. C. H. Wheler reserve their opinion, and Mr. A. S. D. Thomson is of the opinion that the Act should be allowed to expire in 1923.

The signatories say that they have examined a mass of evidence, including that brought forward by the following bodies :—

(1) The National Federation of Property Owners and Rate-payers, represented by

Mr. E. J. Churchman, J.P.,
Mr. A. J. Williams,
Alderman Cheverton-Brown.

(2) The Property Owners' Protection Association, represented by
Mr. Edwin Evans, J.P., L.C.C.

(3) The National Federation of Property Owners and Factors of Scotland, represented by

Mr. William Murray Crone, F.S.I.,
Mr. William Forrest (Lord Dean of the Guild of Edinburgh),
Mr. Stewart (the Secretary),
Mr. Burns Petrie.

(4) The War Rents League, represented by
Mr. Dan Rider.

(5) A Conference of Owners of Industrial Dwellings, represented by
Mr. Arthur Moore.

(6) The Association of Women House Property Managers, represented by

The Lady Selborne and
Mrs. Vernon Ley.

(7) The Scottish Labour Housing Association, represented by
Mr. Joseph Sullivan, J.P.

We are disappointed that the Committee should be apparently unable to recognise that the whole question is one not of expediency but of justice, and by denying justice to any section or class of the community we cannot advance the interests of the people.

Why should owners of property be treated less fairly than anyone else? We may assume that a large number of people are willing to spend a penny or twopence a day on newspapers. It is equally obvious that if the price of a daily paper were increased to a shilling that its circulation would be nominal; while if its present price were doubled, its profits would probably be diminished instead of being increased. In a similar manner any shopkeeper or any combination of shopkeepers might double or treble the cost of sugar or tea, but this would have the result of introducing new competition, and unreasonable prices would be reduced. If a Government Department suddenly announced to the public that sugar could only be sold at its cost price or below its cost price, the grocer would naturally stop selling it. Do not the same considerations apply to those who at their own cost and at their own risk erect houses? Is it not in human nature that, having spent money in the hope of getting a return in the form of interest on it, a man should expect to be free to make what he can?

The Increment Duties of 1909 failed to produce revenue because they restricted the profits of successful speculation, and those duties are now repealed. But it might well be argued that there is more justification in limiting the profits of a speculator in land than a speculator in building, for land is not created by human agency, while building is.

If the one attempt to interfere with the laws of supply and demand was a failure, is there any reason to expect that the second will be a success?

How can anyone say within very wide and general limits what is a fair price for certain accommodation? All it seems to us that can be determined is the price that the average man at any given time is willing to pay for what he wants.

If that price gives the owner a large profit, it acts automatically to reduce the general level of rents by encouraging others to speculate in building, and will in the end act by reducing rents which are in excess of a sum which ensures a fair return on capital expended. If an owner, for the sake of argument, were making a profit of 25 per cent. on his capital in the form of rent, the investment would be such a good one that more building would take place, and the tenant who was paying 25 per cent. on the capital expended would soon have a greater choice of accommodation given to him. But if in consequence of a Rent Restriction Act the owner makes 2 per cent. on his capital, no one will be induced to build. The logic of the situation is so irresistible that it is difficult to understand the opposition to the removal of a measure which is not only most unfair, but exceedingly stupid, and is making matters worse instead of better.

The record of the last four years has proved that by increasing the function and power of the Government for interference in what used to be considered purely private commercial transactions, we are only at great cost to the State promoting a series of experiments which fail one after another. Less than 200,000 houses have been built under the Government Housing proposals at an excessive figure of cost, and at the same time any possibility of starting speculation in housing has been stopped. The authorities cannot continue to carry out their programme because taxation has been pushed up to an extreme limit, and any further increase would undoubtedly produce less and not more money. It is essential that everything which stands in the way of private enterprise should be removed, because the only hope is that individuals may undertake what the State is unable to accomplish. Our railways and collieries have been crippled by Government interference with complicated questions which were better dealt with by the two parties directly concerned,

and all around us we see evidence of the entire inability of the State to control matters which in the long history of our race have been arranged between men.

High taxation has undoubtedly increased unemployment, and yet theorists are still found who would urge us to believe that we can actually promote prosperity and contentment by legislative measures which mean fresh calls on the public purse.

We hope that, whatever may be the outcome of the elections now pending, the new Government will drastically overhaul its departmental machinery, reducing it to its pre-war scale, and that any fresh legislation will take the form of repealing acts which, like cords, have been drawn round us during the troubles of the Great War. Whether those measures were justified or otherwise during the great struggle is a point which need not be discussed: their repeal is now urgently needed in the interests of a country which is slowly and painfully trying to recover from exhaustion, and which bears upon its shoulders a colossal load of debt.

Our Illustrations.

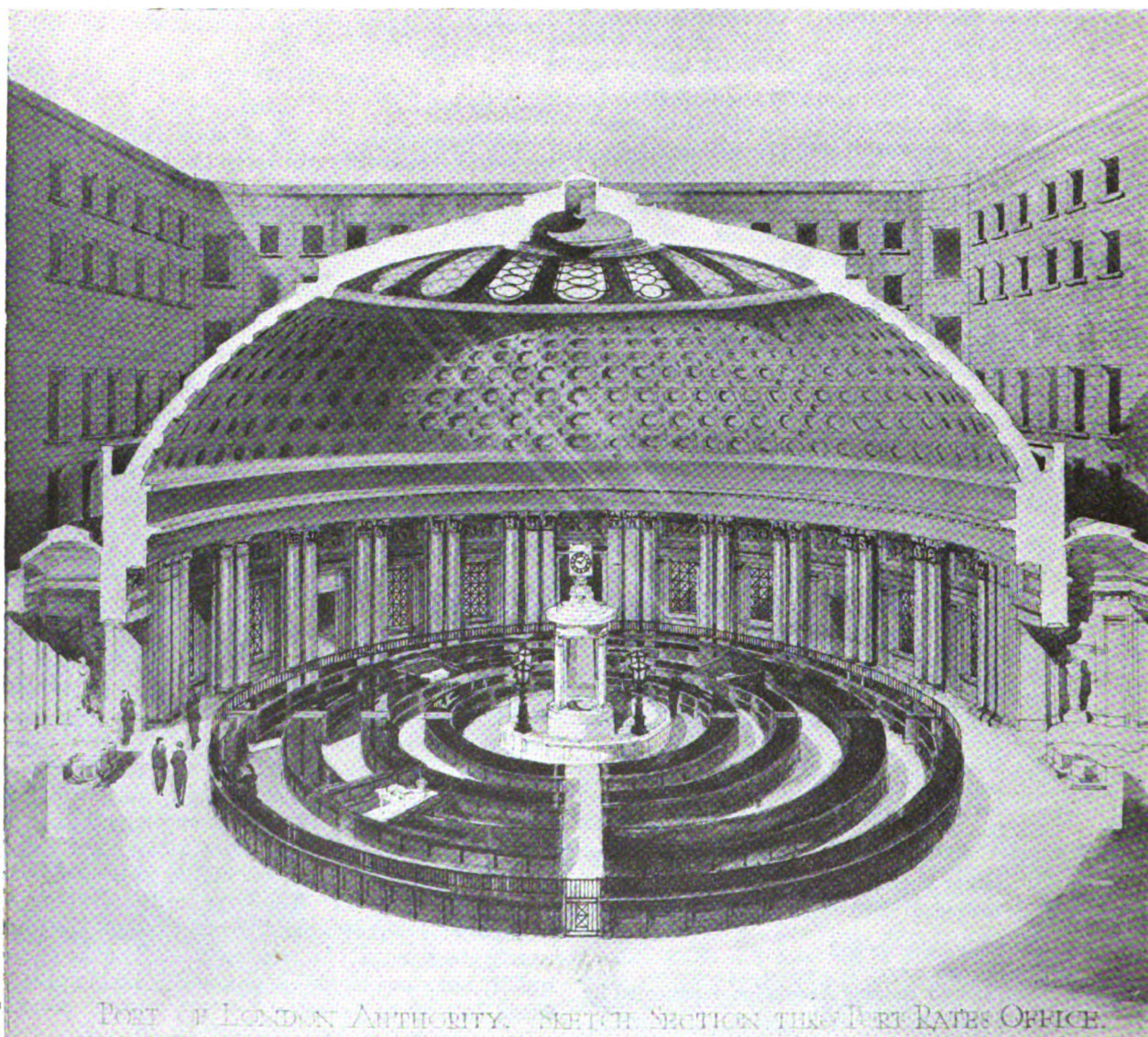
PORT OF LONDON BUILDING. EDWIN COOPER, F.R.I.B.A., ARCHITECT.

THE ROTUNDA.

DETAIL OF ROTUNDA.

GROUND FLOOR OFFICES AND GALLERY OVERLOOKING ENTRANCE HALL.

APSE TO BOARD ROOM AND STAIRCASE FROM APSE.



PORT OF LONDON AUTHORITY. SKETCH SECTION THROUGH RATES OFFICE.

Port of London Authority New Building, Trinity Square, E.C.

We illustrate this week a further selection of views of this building by Mr. Edwin Cooper, F.R.I.B.A.

Last week we confined ourselves to exterior views, and in connection with these we should like to state that the sculpture enrichments were the work of the late Albert Hodge, excepting the two groups, Commerce and Navigation, designed by Mr. C. L. J. Doman, R.B.S. In our issue of next week we shall illustrate rooms which will show some admirable wood carving by Mr. George Haughton, whose work has much of the character of Grinling Gibbons, as well as some of the furniture which was designed by the architect and executed by Messrs. J. P. White & Sons, Ltd., Bedford.

The contractors were Messrs. John Mowlem & Co., Ltd., and Mr. George A. Webster acted as quantity surveyor for the Authority; Mr. W. le Marie acted as clerk of works for the whole building period.

Internal stone work, pavings, and Subiaco marble, Messrs. J. Whitehead & Sons, Ltd.; plasterwork, Messrs. G. Rome & Co.; fibrous plaster, Messrs. F. de Jong & Co., Ltd.; heating, ventilation and kitchen equipment, Messrs. Mumford, Bailey & Preston; electric light and fittings, telephones, bells and clocks, Messrs. Higgins & Griffiths, Ltd.; windows, special glazing and all metal work, Mr. William Smith; sanitary fittings, Messrs. A. Emanuel & Sons, Ltd.; lifts, Messrs. Smith, Major & Stevens, Ltd.; locks and door furniture, Messrs. James Gibbons, Ltd.; screens, counters and all wall panelling, Messrs. John Mowlem & Co., Ltd.; architectural stone carving and internal plaster modelling, Mr. Joseph Whitehead; fireproof glazing, Messrs. Luxfer Prism Syndicate, Ltd.

A large quantity of the Austrian wainscot oak used

in the P.L.A. offices was supplied by Sydney Friday & Sons, of 25, Monument Street, E.C.3.

As this firm has a representative resident in Slavonia, they are in the best position to supply the best material.

Grates, Messrs. G. Matthews, Ltd.; well sinkers, Messrs. Duke & Ockenden.

Concerning the floors at the Port of London Authority's new offices, there are some 13,000 square yards of oak wood block flooring. This was laid by Messrs. Hollis Bros. & Co., Ltd., Hull. The firm avoids piecework as they consider it inconducive to the most satisfactory results. This firm has laid the floors in many other of the most important contracts in London and the provinces.

Slating, Messrs. Roberts, Adlard & Co.; painting, Mr. William Knight; over 5,000 tons of the Wouldham Cement Co.'s "Maltese Cross" brand was used in the construction of the building, supplied by the Cement Marketing Co., Ltd. We are informed that millions of Phorpres Fletton bricks were also used on the building, supplied by the London Brick Co., Ltd.; oak and hardwoods, Wm. Oliver & Sons, Ltd.; glass, Wm. J. Ross. The entire asphalt work was carried out by Messrs. Lawford & Co., Bow Bridge, E.15., who are also executing a number of other large contracts for well-known architects. Messrs. F. J. Barnes, Ltd., and Bath & Portland Stone Firms, Ltd., supplied the Portland stone tiling; Messrs. Cope & Co., steel work; Messrs. Dorman, Long & Co., Ltd., and Messrs. Haywards, Ltd., supplied iron circular staircases and pavement lights; Messrs. Mathew Hall & Co. are responsible for the plumbing; Messrs. W. H. Heywood & Co. supplied patent glazing; stone steps and landings were supplied by Joseph Brooke & Son; granite by Messrs. A. & F. Manuelle.

Notes and Comments.

Town Planning at the Birmingham University.

Town planning is to be thoroughly taught at the Birmingham University. Mr. William Haywood will give a series of ten lectures, commencing October 12 and terminating on December 14, in which he will deal with Ancient, Mediaeval and Renaissance Town Plans, Modern Town Growth, Garden Cities, Municipal Recreation Grounds, and other cognate subjects. These lectures will be free, and after them will follow a second course consisting of three lectures by Mr. H. H. Humphries, the City Engineer, and two lectures given by Mr. John Robertson, the Medical Officer of the city, while a third series of five lectures will be given by Mr. Francis C. Minshall, the Chief Assistant Solicitor to the Corporation, on the law relating to the subject. After this second series of lectures twenty further lectures are to be given by Mr. Haywood, presumably during the summer and autumn.

The City and Old London Bridge.

At a meeting of the Court of Common Council a letter from the Archbishop of Canterbury to the Lord Mayor was laid before the Court. It was urged that the Corporation should preserve the arch, but the Bridge House Committee had been advised that their funds could not properly be applied to such a purpose, for which, it was stated, a sum of £11,000 would be required. The President of the Society of Antiquaries had written that his Council felt they would not be justified at the present time in appealing to the public for funds for such an object. The Office of Works had made an examination of the arch, and had come to a similar result. This is what we should have expected. It is easy to declaim against the destruction of "priceless relics" of the past, and quite another thing to subscribe money for their preservation. In this case we feel little sentiment about the demolition of the arch, which, interesting as it is, has no superlative degree of merit, and we are sure that, if it were preserved, few visitors to London would go down into the cellar constructed to contain it, and that the project would have given London another white elephant. If, on the other hand, a few fine models of the whole bridge at different dates were made and placed in

the Guildhall Museum, we believe they would be of value and interest to the public.

A Curious Decision.

Wembley Urban District Council have had before them 45 plans in connection with the stadium at the British Empire Exhibition, and have formally disapproved them.

The surveyor (Mr. C. R. W. Chapman), in his report, upon which the Council's action was based, stated that the buildings were commenced before the deposit of plans. He felt that the undertaking was of such unusual magnitude that to attempt to express an opinion in one direction or the other would seem presumptuous, seeing that the authorities themselves had had unlimited means of securing the best expert and specialists' advice. The Council would not fail, he said, to remember the slip which occurred to the retaining wall of the Great Central Railway cutting a few years ago that left an apprehensive feeling in the minds of many with regard to the placing the proposed stadium at the back of the same railway cutting, although at a different point. He understood that the Great Central Railway had been consulted, and the site of the stadium removed far enough from the cutting. The plans showed five floor levels of the stadium and main building attached, comprising banquetting hall, Royal box, service quarters, players' dressing rooms, etc.

The Council decided to disapprove the plans formally, and to inform the contractors that, in view of the surveyor's report, there being no precedent for an urban authority dealing with a work of such magnitude, they did not feel justified in taking upon themselves the responsibility of deciding as to the stability or otherwise of the proposed erections.

The grounds of this decision are very curious, as it seems to us that the Wembley Council either have powers of decision which they must exercise, or they have not. No judge would be justified in refusing to try a case on account of its difficulty or complexity, and a Council's officials are exactly in the same position. If the application raises difficult points, it is within their power to take expert advice, but it seems to us to be *ultra vires* to evade giving a decision in the manner described.

London Art Galleries.

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The Royal Institute of Oil Painters opened its autumn exhibition to the public on Monday, October 16. Last week I was able to include in my notes a short preliminary notice, reserving my fuller account for this issue. I then called attention especially in this exhibition to the work of two women artists, Miss Anna Airy, R.I., R.O.I., and Mrs. Betty Fagan, R.O.I. Miss Airy in her one painting shown here, "The Bride's Bouquet," has chosen flowers for her subject, the most beautiful and the most evanescent thing in nature, but has painted them with a freshness, a freedom and crisp touch which is quite away from the accepted and general floral painting. These exquisite white blooms stray freely across the canvas; lilies, azaleas and delicate white blossoms, brought together but not confined by the wreath, and wonderfully set off by the fold of blue silk in the foreground. It appears to me that the characteristic feature of Miss Airy's art is emotional intensity: whatever she paints, whether figures—as in the last R.A.—or the interior of a stable, or flowers, as here, she gets into it a quality of clean drawing and of dynamic force which can only come from being entirely absorbed in the subject then before her.

Mrs. Betty Fagan's figure work is not impeccable, for I might even criticise the lower limbs of the upright figure here, but the quality of her work is brilliant, with something of the freedom and mastery—as I suggested last week—of that strong figure artist the late Anders Zorn. Zorn had painted two girls of Dalecarlia indulging in "An Improvised Bath," one of his most brilliant works, which is now in the National Museum of Stockholm; and Mrs. Fagan, in her "Morning" here, attempts with success a similar problem of the double reflected light from daylight and a glowing fire upon two nude figures, one seated, the other upright. This is not for a moment to suggest that the artist here had borrowed in any way her idea from the Swedish master; I only mention the Stockholm painting at all in order to show how successfully a subject, difficult in drawing but yet more so in reflections, has been handled by the English artist. In the same room Sir John Lavery has a clever painting of the "Derby of 1922." The horses have passed Tattenham Corner and are coming in a bunch, with one leading, to the winning post; and the handling of a Derby crowd is admirable in this painting. A portrait to be noted for its direct and telling brush work is Miss A. K. Browning's "Cigarette"; the lady smoking this last is dressed in black, like Mr. Coates' "Australian Girl" hard by, and each portrait makes to the other an effective pendant. I noted last week Mr. Tom Robertson's landscapes in this exhibition: in "The Hills of Morven" and "The Heart of the Highlands" he is at his best, the colour glowing yet restrained, and to be noted with these is Lewis Gibb's "Morning Solitude," Frank Spenlove-Spenlove's "Thames Valley," and Campbell Taylor's "Poplar Farm." Mr. Lewis Gibb has another good painting in "The Viaduct"; and I would note especially here his work and the marine paintings of Le Maistre, though on this side of art the two sea-pieces of the President, Julius Olsson, R.A., P.R.O.I., of "The Sound of Mull" and "Off Rum," a lovely bay beneath the hills with a schooner just standing in, must claim the first place. Three charming little summer subjects are together in the corner of the first (North) Gallery by Charles D. Ward, R.O.I., Allan Davidson, R.O.I., and E. Matthew Hale, R.O.I. Mr. Ward's painting called "Summer" represents some girls bathing, with broken but strong sunlight piercing through the trees, a scene very Italian in colouring, and recalling something of the Ligurian scenes of H. La Thangue. A far from satisfactory example of figure work is Colin Colahan's "Nude" in the West Gallery, a reclining figure in the pose of the "Rokeby" Venus, but without the same luminosity in the flesh or any subtlety of drawing. In Henry Stock's "Wheel of Life," next to this, the progress of poor humanity seems to have degenerated (as, indeed, it frequently tends to do in these days) into an unseemly hustle, and the older man who is reclining below the

wheel seems very properly disgusted with the whole proceeding; while elsewhere the "Naiades," as treated by Mr. Charles Wyllie, seem in their headlong flight from some intruder to have got inextricably mixed up in yards of linen, in contrast to the trim young housewife who, in W. H. Margetson's "Her Dower," is storing it neatly in her linen cupboard. A clever "Portrait of a Lady" by Sir William Orpen, R.A., is to be noted; and Davis Richter's flower-pieces ("Poppies" and "Rhododendron and Azaleas") are rich and decorative.

At Walker's Galleries a charming selection of water-colours—mostly of Sussex, though Barnard's Castle in Durham also finds a place—with some no less attractive designs for fans, all kept very quiet in key and never carried to a very detailed finish, by the late Hugh Bellingham Smith, lead us in the next room to the original sketches and cartoons by the late Sir Leslie Ward, whose cartoons signed by "Spy" in "Vanity Fair" are well known to the public. These form together a very valuable and interesting collection, for Leslie Ward, as Mr. T. P. O'Connor remarks, "was truly a genius in his own line," though we may not feel so certain of the further statement that even in his line "in all the history of caricature there is no man who can contest his supremacy." But we can fully understand the intense attraction of these drawings to one who has been immersed in our Parliamentary life of the last thirty years, such as the late Speaker, who was looking over them when I was in the Gallery, or the brilliant Irish writer whom I have just quoted. "There they passed before me," he writes, "those figures of the dead through recent past, in all their habit as they lived. . . . It was in a way like seeing the figures and the history of my time, all in a slow and moving procession; with the vividness of the artist's vision and his marvellous power of portraiture, the figures seemed to live and move before you." Coming now to the drawings themselves, I noted specially the marvellous portrait of the Rt. Hon. W. E. Gladstone, dated 1879, and the interesting group of our Generals of the South African War—Lord Roberts, Kitchener, Baden-Powell, French, and others. A very delicate and beautiful pencil drawing, a portrait study quite apart from caricature, is that of H.M. the Queen of Spain; this was drawn at Kensington Palace in May of 1906, which, if I remember right, was the year of her marriage. "Spy" had followed Pellegrini as caricaturist for "Vanity Fair," and his drawings include most of the figures before the public at the end of last century and the beginning of this; there are two hundred of them shown here, among which I noticed specially for their artistic merit and likeness "George Bouchier, actor" (1896); another member of "the profession," Sir Gerald du Maurier (1907); R. Marsh, "the King's Trainer," an excellent full-length portrait; that fine sailor, the late Marquis of Milford Haven (1905); and the late Lord Spencer. In the inner room are water-colours by Harry E. James, and figure subjects in oil by Anna Lea Merritt, which include her allegorical series of "Pilgrimage Through Life."

The Fine Art Society is showing an attractive collection of water-colours by Barry Pittar of "London and elsewhere." These studies of London are excellent, kept loose in treatment, but in good drawing, many of them taking in architecture. I noticed here specially "St. Martin's-le-Grand," "Looking Towards Blackfriars," "The Law Courts," "Ludgate Hill," and "St. Clement Danes," not exactly new subjects, but handled with original feeling.

I wish to call my readers' attention to the important Exhibition of Decorative Art, to include architectural decorations in painting, mosaic, tapestry, sculpture and metal-work—in a word, art as applied to the decoration of buildings—to be opened at Burlington House in January next. Works will be received at the Royal Academy on December 15, 16, and 18, and labels, forms and information should be obtained from the Secretary R.A. It was remarked to me the other day that our Academy had not for years stood in such a high position as now with the public; if this is so—as I believe—it is largely owing to the initiative and unfailing tact of our President.

S. B.



The Architecture of the Southern Slavs.

By Cyril G. E. Bunt.

The immigration of the nomad hordes—the Huns, Bulgars, Avars and Slavs—into the Balkan peninsula commenced with the third century of our era. But it was not until the dawn of the sixth that the invasion attained such proportions as to prove a menace to Constantinople. The Eastern Empire at that time possessing, at least nominally, the whole of the country south of the Danube, the incursions of these hordes was a source of no small anxiety.

A late wave of Slavic immigrants—the Serbo-Croats—invaded in the seventh century the lands which are now known as Croatia, Serbia, Bosnia and the Hercegovina, Montenegro and Dalmatia. Many were their conflicts with Byzantium during that period, but at length they were allowed by Heraclius (610-641) to colonise those districts as vassals.

They thus came for the most part directly under the cultural influence of the Eastern Empire, but with this reservation, that those who reached and settled in the neighbourhood of the Adriatic coast came into contact with the powerful City States of the seaboard. And although they in time absorbed the inhabitants of the country parts, they were naturally influenced by the latinised towns.

The adoption of Christianity introduced the need for churches, and, as it spread among them from both east and west, the selection of architectural forms fell naturally into two schools. In Dalmatia the western Byzantine style was already rooted, for the fall of the Roman power had left many thriving centres of Christianity along the Adriatic coast. Consequently, we find at first the Italo-Byzantine tradition was continued in Dalmatia, while the more austere Græco-Byzantine obtained elsewhere.

The Italo-Byzantine style was exemplified in Dalmatia by churches of a rugged simplicity, typical of the period of decadence following the Slav immigration. We find in their construction the fragments of older (classic) buildings frequently utilised—a peculiarity which is seen in many well-known Italian buildings of a like date (ninth-eleventh century). Portions of classic columns differing in size and height, capitals obviously not matching, and bases that do not fit, testify to the influence of Roman art and the use of its remains. It is worth noting, in this connection, that the famous ruins of the Palace of Diocletian at Split (Spalato), one of the great examples of irregular classic, exhibit similar features.

In plan both the Greek and the basilican form occurs,

while the circular type is found, notably at Zara (San Donato, the Baptistry and S. Orsola). The latter two, and also the Church of the Trinity, Split, are surmounted by a dome and surrounded by apsidal recesses. The Pantheon, Rome, is the great prototype of this form.

With the dawn of the twelfth century the last tie that held Dalmatia to Byzantium was severed, and from then to the early fifteenth century Venice and Hungary contended for possession. The architecture of this period illustrates the change. Romanesque suddenly appears in the splendid campanile and Sala Capitolare of Zara (1105), built by King Colomon. From thence on we get a long list of Romanesque buildings until, in the early fifteenth century, Venetian Gothic had a short vogue. The most noteworthy examples of the Romanesque period are considered to be the south doorway and nave of the Duomo, Trau. These are ascribable to the early thirteenth century (1213), while the west portal of the same cathedral, an exquisite piece of work, dates from 1240.

The twelfth century is, perhaps, the most notable of any in the history of Yugo-Slavia, for at that period we find the first evidences of national individuality.

We have seen that in Dalmatia they forsook the Byzantine for the Romanesque type. But, with certain important variations, the other branches of the Yugo-Slavs (they may be grouped together) adhered to the traditional Byzantine form until the loss of their independence at the end of the fifteenth century. The whole of this period may conveniently be divided, as is done by M. Buls, into three groups.

The first of these commences with the reign of the Grand Jupan Stevan Nemanja, the founder of the Nemanjic dynasty of Serbia, and ends about two centuries later. Within this period the celebrated foundations of Studenitsa, Zhitsa, Arilje, and Gradatz were established. All these are found in the valleys of the Morava and Ibar. In them all the western (i.e., Dalmatian) influence is strongly marked; in fact, the characteristic type may be said to have been inspired by a clever intermixture of the Romanesque with Byzantine forms.

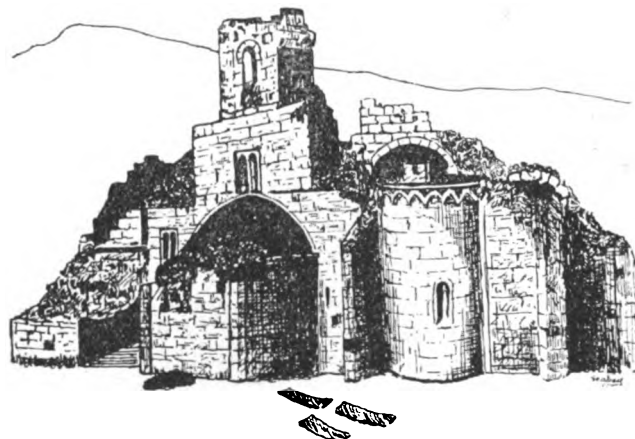
Studenitsa, by far the most celebrated of these, was built by Stevan Nemanja in 1191. Although not of large dimensions, the church is finely proportioned and structurally good. The narthex, a later addition, somewhat spoils its appearance, however. The walls are of white, polished marble, and it is famed for the minuteness and beauty of

the decorations on the portals and windows. The west doorway—square-headed, with a lunette carved in high relief and a somewhat stilted arch of mouldings—is the best preserved, and has an outer moulding of delicate carving Byzantine in type. The other doors were once beautiful also, but suffered, as did all the windows except one, by the Turkish occupation, when the church was used as a stable.

Zhitsa, anciently Kraljevo, was formerly the coronation church of the Serbian kings. It was built *circa* 1210 by Nemanja's third son, St. Sava, who crowned therein his eldest brother, the "first crowned" king of his country. Ruined in Turkish times, only half has been restored. The narthex is still a ruin, but the tall tower is still preserved. The roof of this and of the three cupolas are restorations. The church, including the ruined portion, has vestiges of no less than seven doors, the result of a custom of opening a new doorway for the coronation of each succeeding king. The interior has been twice decorated with frescoes. The latest paintings date from the sixteenth century, but in places they have peeled off, revealing the earlier work beneath. These are very ancient, certainly antedating the closing up of at least some of the doors.

Arilje is a plain, barrel-vaulted cruciform building, with a central cupola, a very flat apse and the inevitable narthex. The villagers tell that it is the oldest church in Serbia; but it was founded by King Dragutin, *circa* 1260, and has been partly destroyed by the Turks. Dim frescoes, ancient and quaint, cover the walls, the figures unfortunately having their faces obliterated by the intolerant Moslems.

Gradac, now merely a ruin of square cut stone and marble, built in 1314 by Queen Helena, is unique in showing a combination of three styles. In plan it is Byzantine; in



GRADAC. XIV c.

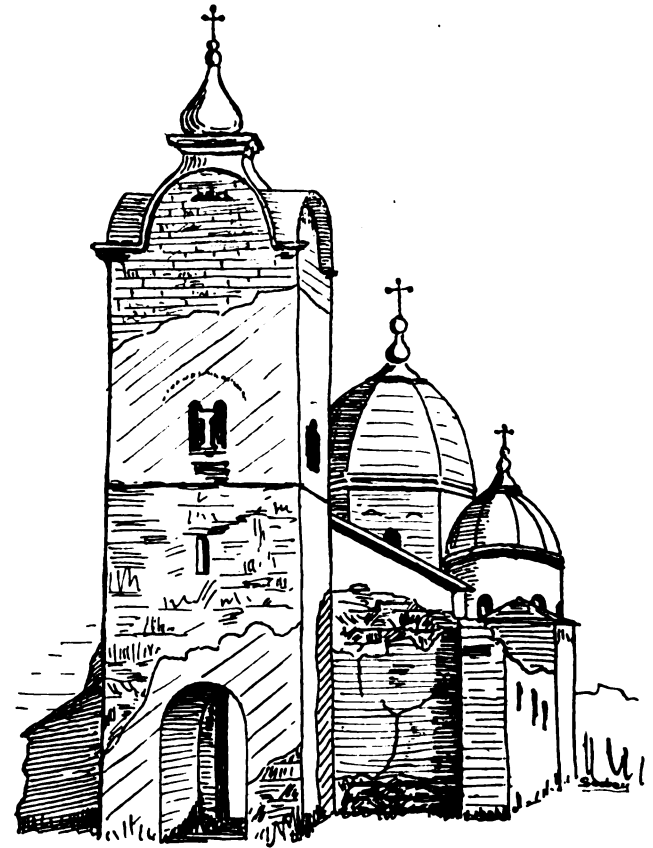
structure, with its counterfeit-arched vaults, supporting pillars, and its marble abutments Dalmatian Romanesque; while the main doorway is reminiscent of early French Gothic.

The Dechani monastery is considered one of the gems of Yugo-Slav architecture. The attached church, in spite of its late date (1330), must be included with the first group because of its Romanesque tendencies. It is peculiar in having a nave of five aisles, each terminating in an apse, and a narthex of three bays. It is built entirely in white and dull red marble derived from local quarries, the architect being a Dalmatian from Cattaro. The doors and windows are elaborately and beautifully carved, far surpassing anything else to be seen in Serbia. Within it is covered with fine old frescoes, of particular interest being the line of kings of the Nemanja dynasty on the wall of the narthex. All the human faces within reach have here, too, been defaced, but the higher ones are intact. The floor is of white and red marble, and some of the piers are monoliths.

The second group is characterised by a return to eastern Byzantine forms derived from the classic type of the tenth century—Hagios Theodoros at Salonica. At this period we find that Yugo-Slav art first attains individuality. It commences with the reign of King Milutin (1281-1321), famous as the deliverer of the South Slavs from Byzantine domination, and equally renowned as a builder of churches.

Although a phase of the great Byzantine tradition, the architecture of this, the finest period of Yugo-Slav art, has its own peculiarities. The stone and marble of earlier times gives place to brick and tile work of great decorative value. The cupolas are raised on tall drums with slender lights, and all the mouldings are, like the whole decorative scheme, of vari-coloured bricks. Although this style of construction is become identified with Yugo-Slavia as a national type, it has its classic prototypes in the churches of St. Elias and the Apostles (Souk-Su Djami), Salonica.

The most noteworthy examples of this period are the church of Grachanitsa, the tiny Kraljevski Crkva at Studenitsa and the Klimentije church at Ohrid.



KRALJEVO CRKVA
(Zhitsa).
XIII c.

Grachanitsa is an imposing building of great charm, the only thing to mar the fineness of its proportions being the narthex, a later addition. It has a compact soundness of composition unique in the history of Serbian architecture. The simple contrast of curves in roof and domes with the broad effect of banded brick walls, the balanced grouping of the cupola emphasizing the importance of the central dome, give one a sense of complete harmony. The base development of the central drum is unique in churches of this period. The church was built 1321-22, and the frescoes adorning the interior are of contemporary age.

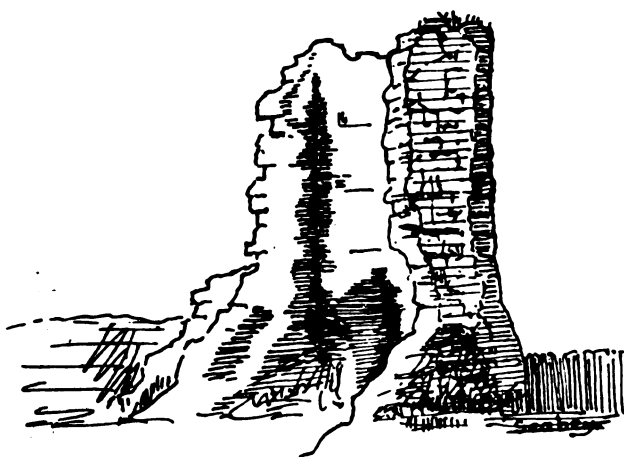
The Church of St. Clement, Ohrid, was built *circa* 1295 upon the site of an earlier (tenth century) building. The ornamental brick and tile work of its walls are particularly pleasing and of special interest, as in this church the national style may be considered to have found its earliest complete expression. This church is further remarkable as being the home of the only statue that is to be found in any church of the Greek Orthodox faith.

Passing to the third group, the plan and details are still of the Byzantine type, and the decorative features include a still more elaborate use of variously coloured banded bricks. New motives are, however, introduced, more originality is seen in design, and the vaulting and dome construction are more aesthetic. This, the final phase of the Serbo-Croat history (1370-1450), is a period of transition that but for

the Turkish conquest would have borne wonderful fruit to-day.

The architect, Rade Borovic, who rose to (local) fame in King Lazar's reign, inspired a whole school of builders. Most of the churches of the period were built in this king's reign, and it will be remembered that it was Lazar who was defeated at Kossovo when Yugo-Slavia lost its freedom to the Turk. Of this epoch may be particularly mentioned the church of Krushevats (*circa* 1350), now restored, after being used as a Turkish powder magazine. The restorations include the unsatisfactory roof of Alexander Karageorgevich and all the interior decorations. Happily, the fine details of the external features—the delicately pierced stone work of its round-headed windows and the quaint Slavic motives, not untainted with barbarity—have survived the iconoclastic period of the Turkish domination.

The period (fourteenth-fifteenth century) may be termed the feudal age of Serbia. Many castles were built throughout the land. Plain, solid and utilitarian, they are now either crumbling ruins, like Lazar's Castle at Krushevats, or metamorphosed into uninteresting fortresses with guns "fit for a museum."



RUINS OF LAZAR'S CASTLE,
KRUSHEVATS.

From the Turkish conquest on we must look once more towards the Adriatic coast to continue the story of South Slav architecture. *En passant*, it may be said that some of the mosques and other buildings raised for the Turks are good—it is known that when the native architects might no longer erect churches they built mosques and baths for the Moslems. Begova-Djamia, after those at Constantinople and Selim's at Adrianople, the largest and finest in Europe, has Byzantine domes and other borrowed features.

In the Slovene lands there are fine examples of mediæval architecture, but throughout nearly the whole of Yugo-Slavia the arts were nipped in the bud in the mid-fifteenth century. Such provinces of Dalmatia as did not fall to the Ottoman yoke continued their artistic development—towns like Ragusa, Zara and Sebenico, to mention but three. There the Italian Renaissance bore fruit of great vitality. Ragusa has been called truly "the cradle and centre of the Yugo-Slav Renaissance." Many of her finest churches date from this time. The Rectorial Palace, built to the design of Michelozzi, a pupil of Donatello, and the Dogana (the ancient mint of the famous republic), are also of mid-fifteenth century date. In style they are Italian Gothic of a high order.

Perhaps the most distinguished example of the Dalmatian Renaissance is the imposing Duomo of Sebenico. It is striking in a town whose streets abound with examples of excellent Venetian Gothic. The singularity of its construction is that in it neither timber nor brick is employed. From its foundations to its massive, wagon-vaulted roof and great dome it is built of dressed stone, marble and metal. The work of two periods, and therefore two minds, it stands as a monumental example of the great change which meanwhile took place—the transition from Italian Gothic to Renaissance. The architect of the lower storey, including

the side aisles completely vaulted, was Antonio, a Venetian. The remainder was built by Giorgio Orsini of Zara, whose work was instrumental in introducing Renaissance influences into Dalmatia. His style was eagerly imitated and developed by the many celebrated architects of the period, such as Benac of Trau, Mihaljic of Ragusa, Matejevic of Sebenico, etc.

During the last fifty years there has been a fervent longing for self expression in Yugo-Slav art. But the modern architecture has little to recommend it except that it has followed traditional forms. Only one architect has risen to enjoy a great reputation—Plecnik. But it is not this man who will have the greatest formative influence upon the architecture of the future Yugo-Slav nation. There is no modern who has touched the depths of the South Slav heart and soul as has Ivan Mestrovic. That strange mystic, the son of a Serbo-Croat peasant, is the ultimate product of the spirit of the younger Yugo-Slavs. And, although a sculptor, there is no doubt that his wonderful archaic idealism will have a powerful effect upon architectural forms in the future. His Temple of Kossovo is as the Poles apart from the normal, powerful beauty of the mediæval churches. But we are compelled to admire his genius even while we must deplore the inevitable anarchy which imitation by immature disciples is bound to bring forth.

"The Architect" Fifty Years Ago.

OCTOBER 26, 1872.

THE CONDITION OF COURT-HOUSES.

It has been said that it was not improbable that one of the causes which led to the death of Mr. Justice Willes was the inadequate ventilation of the courts in which he sat. All who have had to pass a few days in succession in one of our ordinary courts will allow that it is possible for the unhealthiness of such places to oppress a highly sensitive brain which there was obliged to be in a condition of tension. The fact is it is only lately that the vital necessity of ventilation has been recognised, or that a building should be of dimensions that would not only admit of people being packed in it, but that each should have a determined quantity of air-space. In most of the public buildings erected during the reigns of the Georges, these things were little attended to.

But it is not our upper or more important courts alone that are in this ill-condition—the inferior courts are often, if possible, in a worse. Several of the metropolitan police-courts, as regards ventilation, stand below the punishment cells of a modern prison. Numbers of the magistrates' courts throughout the country are equally unhealthy, for when they were erected so large a number of magistrates and other officials to attend them was not anticipated. At the Nottinghamshire Michaelmas Sessions, which were held last week, one of the magistrates brought before the Bench the present condition of the Mansfield court-house, and this we think may be taken as a fair enough sample of many other courts. The Mansfield court contains about 420 superficial feet, and according to the ratio adopted by the Education Board for children, ought not to accommodate more than forty people. Yet ordinarily there are at least ninety, while on such times as the Brewster Sessions, as many as 210 people somehow contrive to pack themselves in the room. It is needless to say that the air is pestilential, and so intolerable to those entering from the fresh air, that several of the magistrates have declined to again attend them. There is no accommodation for solicitors or reporters, and the magistrates in winter have to sit within two or three feet of a fire, a cold draught blowing all the while on their heads. The house of the superintendent of police is also, we are told, not fit to live in.

Yet Mansfield is a thriving town, with two lines of railway, and is soon to have a third, and surrounded by a district rich in iron, coal, and limestone. Under such circumstances it is surely to be expected that those who administer justice may do so without risk to their health. We hope that under our new Health Bill the superintending officers will not be afraid to investigate the condition of the court-houses in their districts.

Lord Leverhulme has consented to perform the opening ceremony in connection with the new Samson Clark building in London, on Monday, November 6. The occasion will celebrate the completion of the largest building in Great Britain solely devoted to advertising service and requirements, from printing presses in the basement to photographic rooms and studios on the roof.

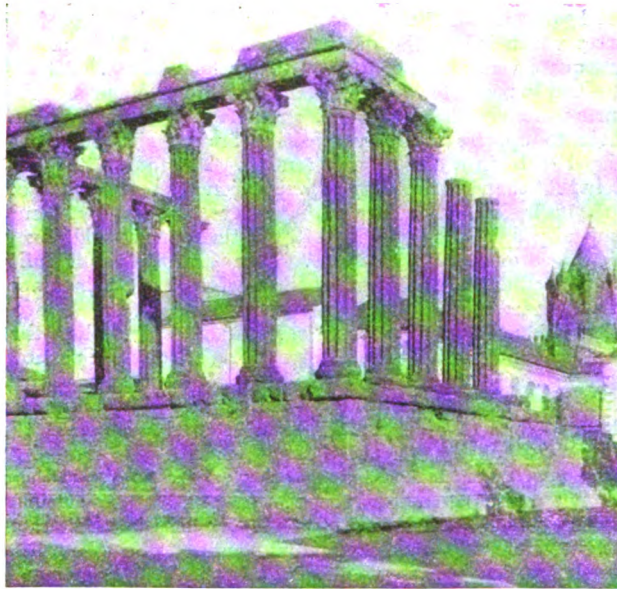
Notes from Portugal.

By G. A. T. MIDDLETON.

No. III.—Evora.

Evora and Coimbra are similar in many ways. They may well be called sister cities, but they are not twins. Both are built on eminences, but while Coimbra is surrounded by other hills from which it is only separated by valleys, Evora overlooks a wide plain; both trace their history back to the Roman occupation, but Coimbra was only occupied by the Moors for a short period. Evora was long held by them: and this fact has to be borne in mind constantly. It accounts for most of the outstanding differences between the two.

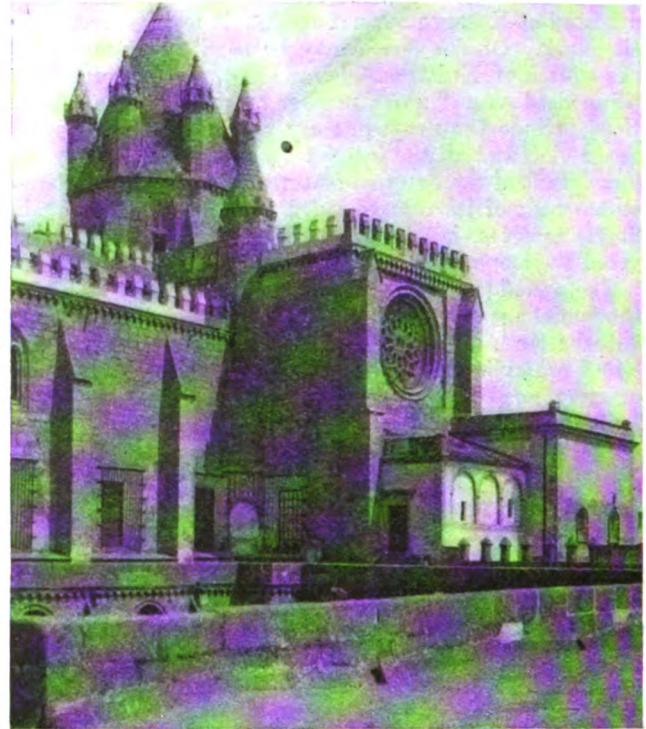
Evora, however, possesses more evidence of Roman occupation than the inevitable aqueduct, for there still stand considerable remains of a temple, known locally, but without authentication of any sort, as the Temple of Diana. It stands on a podium no less than 3.46 metres high, including the strong moulding with which it terminates. The width across the front is 15.25 metres, but the original length cannot be accurately fixed, the northern end of the podium and the stairs which gave access to the building having been destroyed. All the existing columns are detached, so that it was probably peripteral, as it was certainly hexastyle—the six columns of the southern end being still in place, with a portion of the architrave and frieze. These columns have a maximum diameter of



TEMPLE OF DIANA EVORA.

1 metre, while the intercolumniations vary between 1.35 and 1.63 metres. The total height of the columns, including bases and capitals, is 7.68 metres. All is of granite, excepting the fine Corinthian capitals, which are of white marble; and these are of delicate workmanship and generally in a good state of preservation. The granite, on the other hand, has not weathered particularly well, and its workmanship is coarse, even to the extent of the employment of twelve flutes only to the columns in place of the usual twenty-four.

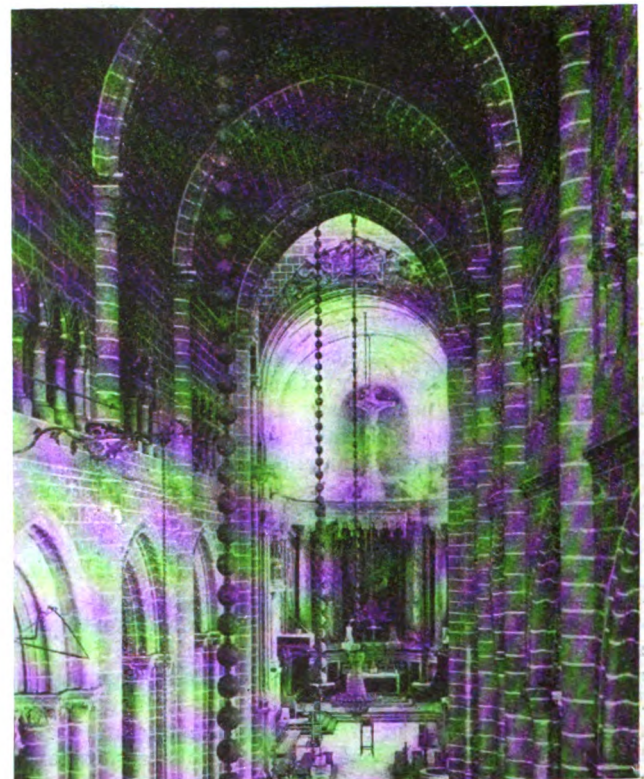
The photograph which illustrates the Temple also includes a distant view of the conical termination of the tower over the crossing of the Sé, or Cathedral. The effect is both dignified and rich, and the treatment rare and worthy of the close attention which a nearer view renders possible; for the tower is octagonal, and the eaves follow its outline, the cone only taking a circular plan, and doing so gradually, as the eight angle turrets are cleared. The same sort of thing is occasionally to be found in central France, but generally upon a smaller scale, the date being that of the evolution of Gothic art—in France from the romanesque and in southern Portugal from the same source, but with



EVORA CATHEDRAL FROM CLOISTER ROOF.

some admixture of the Moorish. In fact, the constant recurrence of the cone motive is here a sure indication of Moorish influence.

This near view has a further interest, for it was taken from the south-west corner of the cloister roof, which, as will be seen, is of stone slabs, slightly dished to the pockets of the vaulting, and so guiding the water to the gargoyles, while the corbel tables are all Moorish.



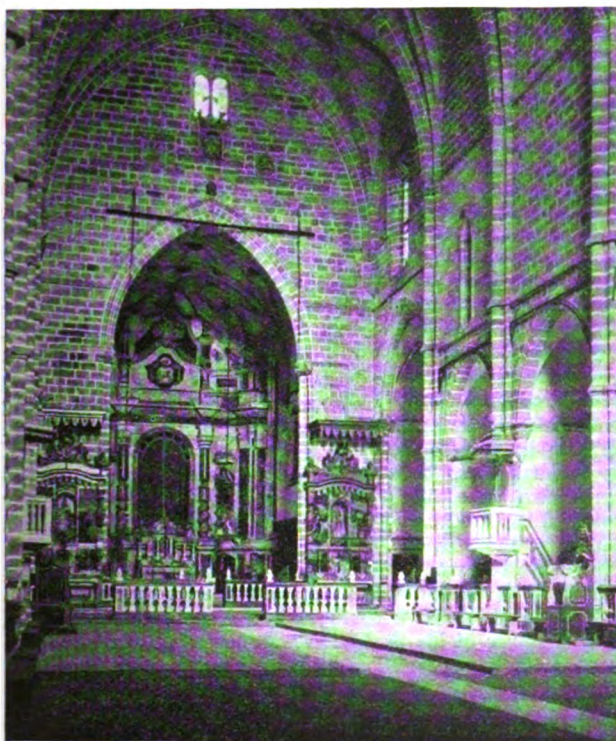
INTERIOR OF CATHEDRAL, EVORA.



GATE AT FOOT OF GALLERY STAIR, EVORA CATHEDRAL.

The buttresses must be taken in conjunction with the interior, for they occur opposite to transverse ribs of a pointed barrel vault which spans the nave. There is no clerestory, and the triforium is blind, but there are hidden flying buttresses. The details both of carvings and mouldings are romanesque. Taken together, all these things point to the church having been one of the series, found mainly in southern France, of tentative experiments out of which the cross vaulting system was eventually evolved.

The present chancel and its side chapels were added in 1711, and are quite notable works of that time, worthy of the genius of Wren. Unfortunately they are not at all easy to photograph, though the internal view gives some

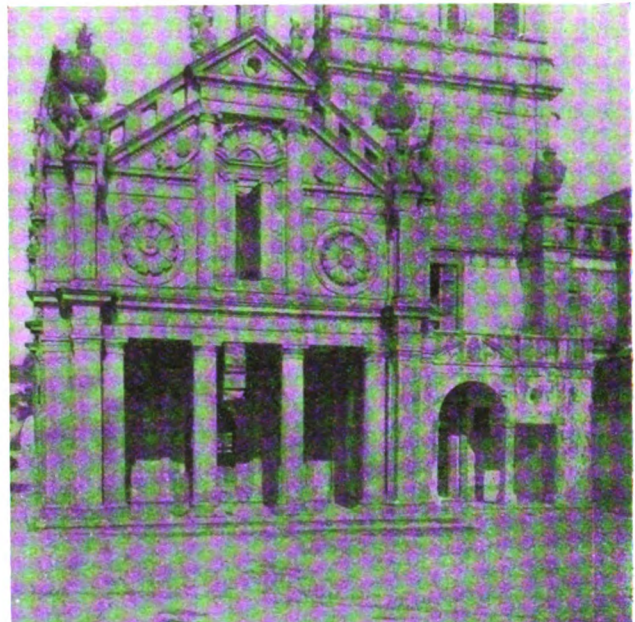


INTERIOR, CHURCH OF SAN FRANCISCO, EVORA.

idea of the general proportions, and the iron gates, with the candlesticks standing before them, indicate quite well the sense of line, combined both with richness and restraint, which the designer possessed. Other iron gates, of early sixteenth century Gothic work, as at the foot of the gallery stairs, are worth comparing with these.

In conjunction with the Cathedral it is necessary to consider the interior of the Church of San Francisco, for the vaulting shows another step in evolution. The main idea is still that of the pointed barrel, but there are interesting cross vaults of lesser span, also of pointed form and with strong ribs; while the buttresses have been made of great depth to resist the concentrated thrust, and have been used as partition walls between side chapels. There are no aisles, and the chapels are just separated from the nave by low screen walls, apparently of about the same date and designed by the same great master as the chancel of the cathedral, to whom perhaps may also be ascribed the handsome confessional boxes, of unusually open form, which occur between the second and third chapels from the chancel on either side.

The church known as "da Graça," now in ruins, is of an entirely different type—Palladian renaissance, built between 1524 and 1529. The granite of which it is constructed suits it well; but the front, as will be seen, is by no means so satisfactory as a whole as are some of its various com-



W. FRONT, EGREGA DA GRAÇA, EVORA.

ponent parts, such as the Doric portico, the Ionic order over it, and the flanking portico from which the cloisters are entered.

Renaissance cloisters are rarely met with, and these are really beautiful, a Renaissance dress being applied with rare skill to an essentially Gothic buttress treatment by someone who had courage and skill to employ a novel form of capital where those belonging to either of the Renaissance "orders" would have been inharmonious.

Another Renaissance building, of a totally different description, is the Lyceu, or College, of comparatively recent date. Like the University of Coimbra, it is arranged round a great quadrangle, but in design it carries out the idea better, and is admirably suited to a hot climate. There is a verandah round all four sides of the courtyard, with a covered balcony over, like double-storied cloisters, from which all the rooms are entered, the centre being emphasised by a fine portico approached by stone steps. It could have been easily spoiled, but here it is well balanced and satisfactory, while from the practical point of view it would be difficult to imagine an arrangement which would provide more perfect supervision of the students.

But if the buildings which have been mentioned are



EVORA. MOORISH RUINS IN PUBLIC GARDENS.

those of greatest import, as perhaps they are, though they do not exhaust the list by any means, they scarcely indicate the general feeling of the town, which is Moorish in spite of the long period of time which has elapsed since the Moorish occupation. The town walls retain their Moorish plan, built on a sharp zig-zag plan, with little turrets at the outer angles, corbelled out with plain conical corbels; and here and there one meets with ruined fragments of horseshoe arches, curiously cusped, or with modern doors and windows, or even domes, which are frankly based upon Moorish models. The effect is picturesque in the extreme, but only in rare cases is there anything of this sort to be found which is worthy of serious architectural study, or of illustration in an architectural journal—with the possible exception of the ruined fragments in the public garden, of which a photograph is given.

The Church of St. Braz may be taken as typical of modern Evora. Internally it is a hopeless disappointment—a mere bare rectangular hall with a gaudy chancel; but externally it is an imposing imitation, in plaster, of Moorish



CLOISTERS, CATHEDRAL, EVORA.

architecture, with sham turrets terminating in cones, and with tall Moorish battlements, breaking the outline and yet not spoiling the dignity. If any present-day architect wishes to strike an original note, here is a suggestion for him which may be worth development, especially if colour contrast (say, red brick and white stone) were carefully employed.

Personal.

The Council of the British Cast Iron Research Association, whose headquarters are at Birmingham, and who work in co-operation with the Government Department of Scientific and Industrial Research, have offered the important post of Director of Research to the Association to Dr. Percy Longmuir, of Sheffield, who has accepted the position.

Dr. Longmuir is a well-known Sheffield metallurgist, and has had a lifelong experience in research work in connection with the cast iron industry.

The appointment is a very important one from a national point of view, as the director's work will have a very material influence upon the prosperity of the foundries all over the country, of which there are over 3,000.

The silver-gilt key which was given to H.R.H. Princess Mary at the opening of the children's ward of the General Infirmary, Leeds, was made by Messrs. Joseph Kaye & Son, of Leeds and London. The ward, which was carried out from the plans of Mr. Sydney Kitson, F.R.I.B.A., was the wedding gift of the city to Princess Mary.

Messrs. Webb's New Works.

Messrs. Percy C. Webb, Ltd., have now completed their move to their large new waterside premises at the Marble Wharf, Verney Road, Old Kent Road, on the Surrey Canal.

The equipment of the works is quite up-to-date, and comprises: carborundum, frame and rip saws; rubbing tables; polishing machines; moulding and electrical hand tools: while outside on the wharf a large electrical crane serves the depot and the long works buildings. Indeed, with the increased plant and the more extensive accommodation at Verney Road the firm will be able to give their clients better and speedier service than was ever possible at the old works.

Although in the south of London, the wharf is in a really accessible position, being served by regular 'bus and tram routes from the Elephant & Castle, which point connects with the main London termini and all the London districts.

Messrs. Webb cordially invite any friends who are interested to inspect their new facilities.

General.

A new entertainment pavilion is to be erected at Rothsay.

We regret to announce the death of Mr. Charles Astley Owen B.A., F.R.I.B.A., of Dublin, which occurred on October 17.

Mr. William Hopkins Thomas, J.P., of Oswestry, Salop, builder and contractor, who fell dead while partridge shooting on September 1, left £12,194, the net personalty being £11,709.

The Llandudno Town Council have purchased a site on the corner of Dyffryn and Mowbray Roads, at a cost of £1,940, for the purpose of erecting additional working class houses.

In the presence of approximately 4,000 people, General Sir Charles Monro unveiled on October 14, in the Garden of Remembrance, Streatham Common, the war memorial to the 731 men of Streatham who died in the war. The memorial, designed by Mr. Albert Toft, is the bronze figure of a soldier in fighting order, resting on his arms reversed.

The Provincial Grand Lodge of Warwickshire is appointing a committee to arrange for the erection of a Masonic Temple on a site to be bought from the Birmingham City Corporation. The building is to be a memorial to the Freemasons of the Province who were killed during the Great War, and the necessary funds will be found by systematic collections in the Lodges and Chapters of the Province.

The death occurred at Aberdare, last week, of Mr. Thomas Roderick, the well-known architect and surveyor. The late Mr. Roderick was born at Merthyr 68 years ago, and it is doubtful if any member of his profession was better known in Wales. He was actively associated with the Merthyr Board of Guardians for over 25 years, and numerous institutions were constructed to his design. Two of the sons whom Mr. Roderick leaves behind are architects, and they have assisted the deceased gentleman in his business—Messrs. Henry and Benjamin Roderick.

Follies.—II.

By Charles G. Harper.

Among these more amiable eccentrics was the once famous "Jack Fuller," otherwise John Fuller, Esq., of Rose Hill Park, Brighton, Sussex, alternatively known to his contemporaries as "Honest Jack Fuller" or "Mad Jack," according to their politics and point of view. He was born in 1757 and died in 1834. Member of Parliament continuously in four successive Parliaments, he was a very popular figure; so much so, indeed, that a sum of £30,000 was subscribed towards his election expenses. His lunacy or his honesty, whichever you will, seems to have been liked. Pitt offered him a peerage, which he declined, saying "Jack Fuller I was born, and Jack Fuller I'll die"; and he caused to be placed under his portrait bust in Brighton Church the motto "*Utile nihil quod non honestum.*" The



THE "SUGARLOAF," BRIGHTLING.

strange man seems to have made honesty a fetish. He was one of those squires who could not leave a hill-top alone in its natural beauty, but must needs place on it something in the way of a building, generally something ugly. Among these is the "Sugarloaf," intended by him for the residence of a hermit. As hermits were not everyday phenomena, he advertised for one, who was to live in this single-roomed obelisk for seven years, neither to wash, shave, cut his



BRIGHTLING CHURCH AND JACK FULLER'S MAUSOLEUM.

hair, nor hold communication with the outside world. His food was to be passed in through a small boarded window. The reward was to be "made a gentleman for life." That, indeed, was beyond the competence of Jack Fuller or of anyone else, but we may understand "independent for life." He did not succeed in securing the desired tenant. Another of the squire's weird buildings is the obelisk known as "Cleopatra's Needle," on a hill 600 feet high; and yet another is a circular curiosity known as "Solomon's Temple." The "Observatory" is the most peculiar. It has a dome fitted with a camera-obscura, and was intended by Fuller for the use of the farmers, so that they might see from it where their sheep and cattle were grazing.

Last of all, his own mausoleum in Brighton churchyard, designed to resemble one of the Pyramids, and decorated internally with quotations from his favourite authors.



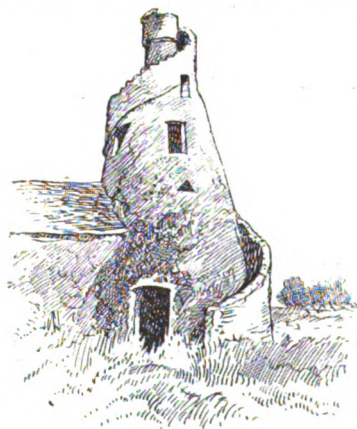
THE FREAK CHURCH, GERRARD'S CROSS COMMON.

Prominent among "Follies" in the censorious meaning of the word, alike for its size, cost and general interest, is the Pavilion at Brighton, the "Marine Palace" and plaything for many years of the Prince Regent, afterwards George the Fourth. Begun so early as 1784, it was, after many alterations, pullings-down and rebuildings, completed in 1818, with the exception of the north gate, the work of William the Fourth in 1832.

The Pavilion was, in fact, the product of an ill-informed enthusiasm for Chinese architecture, mingled with that of India and Constantinople. It suffers nowadays much more than it need do from the utter absence of exterior colouring. A judicious scheme of brilliant colour and gilding, in accordance with the Oriental precedents of its style, would not only relieve the present dull drab monotone, but would go some way to justify the Prince's taste.

"Florizel's Folly" it has been styled, and many aspects of it are undoubtedly preposterous, with its forest of useless pinnacles, cupolas and minarets. The works are said to have cost from first to last over £1,000,000.

The Pavilion, if not itself an inspired work, has given inspiration to a vast amount of wit, in the satiric kind. Among the many who have been moved to gibe at it was Cobbett: "As to the 'palace,' as the Brighton newspapers



HALL'S BARN, DUNDRUM.

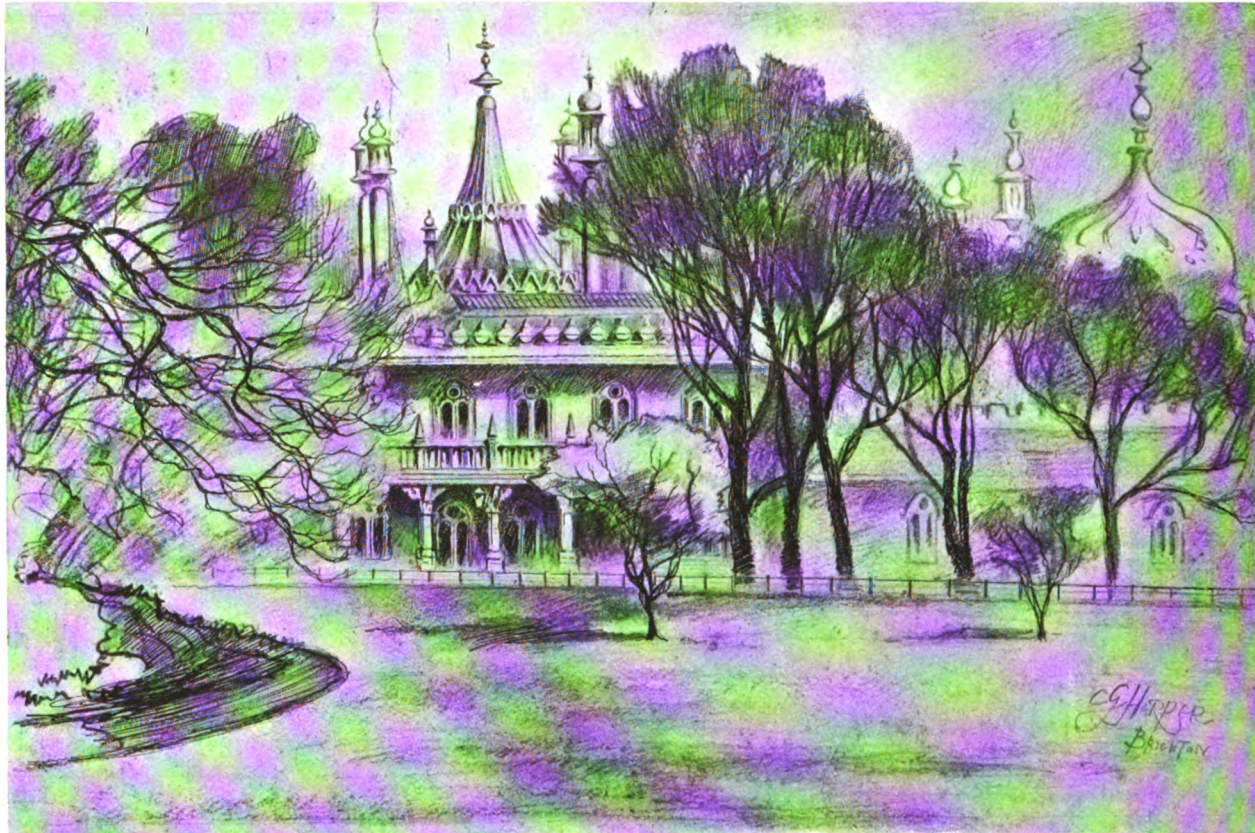
call it, the apartments appear to be all upon the ground floor; and when you see the thing from a distance you think you see a parcel of cradle-spits of various dimensions, sticking up out of the mouths of so many enormous squat decanters. Take a square box, the sides of which are three feet and a half, and the height a foot and a half. Take a large Norfolk turnip, cut off the green of the leaves, leave the stalks nine

inches long, tie these round with a string three inches from the top, and put the turnip on the middle of the top of the box. Then take four turnips of half the size, treat them in the same way, and put them on the corners of the box. Then take a considerable number of the bulbs of the crown-imperial, the narcissus, the hyacinth, the tulip, the crocus, and others; let the leaves of each have sprouted to about an inch, more or less, according to the size of the bulb; put all these pretty promiscuously, but pretty thickly, on the top of the box. Then stand off and look at your architecture. There! Only you must cut some church-looking windows in the sides of the box. As to what you ought to put *into* the box, that is a subject far above my wit."

There is a further comparison, attributed severally to Theodore Hook, Lord Alvanley, and Dr. Johnson, that it looked as though "St. Paul's had come down to the sea-side and pupped."

Brighton never again experienced the Royal favours

field road have long been used to see on Gerrard's Cross Common a singular freak building which at a distance greatly resembles the pumping-station of some waterworks. It is an eccentric church, designed by Sir William Tite and built in 1850. The Duke of Somerset, who resided close by at Bulstrode Park, seems to have had a hand in this horror, but a countryside legend would have us believe that it was the result of two sisters, ecclesiastically-minded ladies, eager for church building, unable to agree as to the style of building they would like. One, it is said, wished something like St. Paul's Cathedral, while the ideal of the other was Westminster Abbey. In the result we see that they got a building which in one part is rather like the new Wesleyan Memorial Hall at Westminster, and in the other like the water tower at Brentford. It is built largely in white brick. But I know those legendary sisters! To them are attributed the tower and the spire which form such odd contrasts at the west end of Ormskirk Church, Lancashire. To them again are credited the similarly odd



"FLORIZEL'S FOLLY": GEORGE THE FOURTH'S PAVILION AT BRIGHTON.

that had advantaged it so greatly in the time of the fourth George. Queen Victoria and Prince Albert tried it, but found not sufficient privacy at the Pavilion, which was sold in 1850 to the Town Commissioners of Brighton for £53,000. To-day alterations are in progress by which the range of buildings, long obscured by lofty trees, will be made more visible from the Old Steyne and Castle Square.

A strange object, like the old pictures of the Tower of Babel, stands just off a little by-lane leading from the gate of the Rathfarnham demesne, near Dundrum, co. Dublin. It is called "Hall's Barn," and was built about 1742 by a Major Hall, in conjunction with his new house at Rathfarnham called "Whitehall." It is a barn or granary, ingeniously constructed with an external spiral ramp, an incline in place of a staircase, intended to be a labour-saving device. He is said to have derived the idea from a similar building called the "Wonderful Barn," erected a little while earlier by the Conollys near Castlebar. As against this very clear and exact account there is the local idea that the building is an "ancient fort," built in the time of Cromwell, and called a "helter-skelter tower."

Travellers along the main London, Uxbridge and Beacons-

tower and spire of Wanborough, near Swindon, and in Herefordshire the two adjoining villages of Vowchurch and Turnastone are said to have been so named because of two rival sisters building churches there. One is supposed to have said: "I vow I will build my church before you turn a stone of yours." And that suffices the simple rustics!

A modern "Folly" on a huge scale has been a source of litigation. This is the so-called "McCaig Tower" at Oban, situated on the hill-top overlooking the bay, and with much the appearance—a considerable way off—of the Coliseum at Rome. It was built at a cost of £5,000 by an eccentric of that name, and came into prominence again so lately as 1915, when the will of Miss Catherine McCaig, a sister of that peculiar person, was in dispute. She had directed her trustees to erect within this building eleven bronze statues of herself, her father, mother, brothers and sisters, including one of her brother Peter, who had died in infancy. Each statue was to cost not less than £1,000. The net value of the estate was £50,000, and certain beneficiaries under the will were not to get their annuities until the statues were erected. Miss McCaig seems to have been a little too careful. The outraged legatees challenged the will, and the judge, recoiling in horror from the prospect of eleven statues of McCaigs, held that the testament was



FRESTON TOWER, FROM THE PARK.

null and void, having neither reason nor public advantage in its favour, and involving sheer waste of money. So the McCaig Valhalla still lacks its proposed assemblage of offences against public sentiment.

The story of a great many "Follies" is lost in mystery, or perhaps it would be more exact to say that they had no story, in the true sense, and were built solely as a whim. But modern folk will persist in seeking romance in them. Thus there stands on rising ground in the park at Freston, on the Orwell below Ipswich, a slim and lofty red-brick tower, six storeys high, dating apparently from the sixteenth century. The best room is on the fifth floor.



THE McCAIG FOLLY, OBAN.

It is quite obvious that whoever built it did so with the object of obtaining a fine view down the estuary; but this simple explanation does not suit the marvel-mongers, who have various stories to account for it. One is that it was built as a study for a former squire's daughter, who studied six hours daily, one hour in each storey, concluding at the top! Another tells us that it was built to be a memorial to the escape of the squire's daughter from being burnt. The Berners family have long owned the properties here, and they bear a monkey crest, duly carved in stone on the park gates. The motto attached is "Del fugo I avola"—i.e., "I escaped from the fire." What originated crest and motto is unknown. The motto is probably only a play on the family name; but the local belief is that the monkey saved the heiress of the Berners.

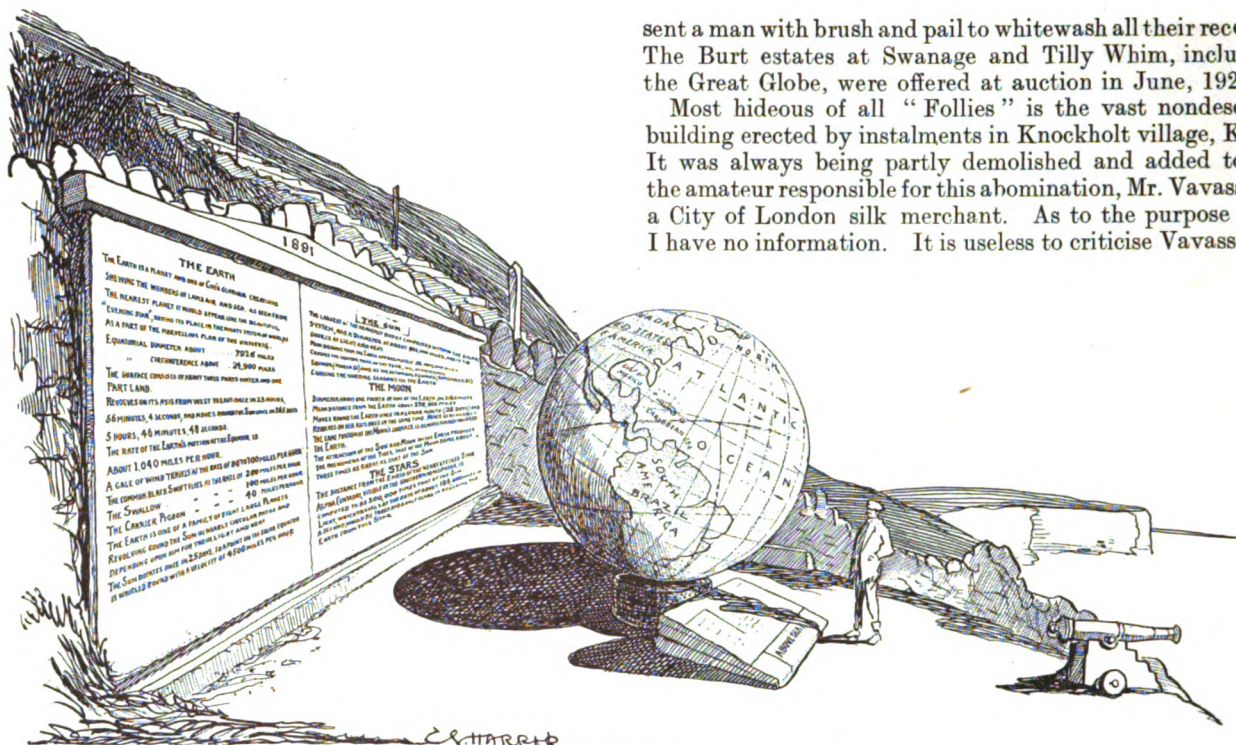
"Follies," as we have seen, were largely built by the old-time squires who had a plethora of money and a love of amusing themselves with bricks and mortar. There have been fewer built of late years, and there are likely to be fewer yet, because all available cash has gone to pay for the follies of the Government. But there are some remarkable modern examples, notably Sway Tower, or "Peterson's Folly," which rises to a height of 210 feet on the plains of Sway, in that New Forest region between

Lymington and Ringwood. It is, alike by its situation and its own loftiness, a prominent object in the landscape, and is visible for great distances. It is built of concrete, and is of a slim, not to say attenuated character, and in strong sunshine looks blindingly white. Incurious strangers generally imagine it to be a water tower, but it was actually built as a mausoleum, and although the builder of it was in later years a convert to cremation, his ashes are duly placed here in a vault beneath his eccentric tower. The person who created this freak was one Andrew Thomas Turton Peterson, barrister-at-law, and sometime leader of the Calcutta Bar and Judge of the High Court there. He built it about 1880, but lived for many years afterwards in retirement in the Canary Islands, dying, a nonagenarian, in 1906.

It must have been about the time when Sway Tower was rising that John Burt was busy at Swanage with his eccentricities on the cliff-top of Tilly Whim. Swanage, the home of both Burt and Mowlem, partners in the great contracting firm, Mowlem & Burt, is full of odds and ends of London buildings which they pulled down. There in the chief street is the Town Hall, which has for its frontage the elevation, designed by Wren, for Merceis' Hall in Cheapside, demolished about 1882. The stones, the contractors' perquisites, were conveyed to Swanage



FRESTON TOWER.



THE "GREAT GLOBE," TILLY WHIM, SWANAGE.

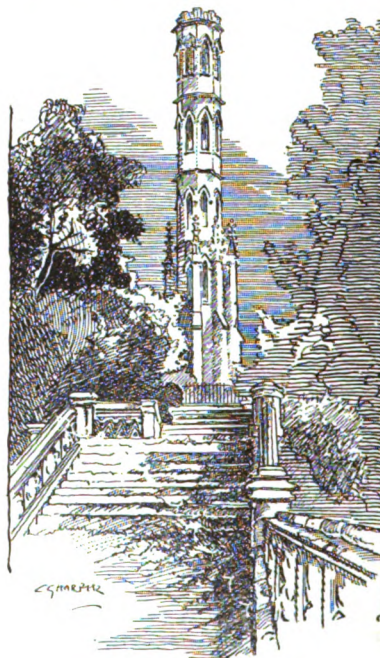
and rebuilt. Burt was interested in the development of the Tilly Whim estate. He imagined it could be made a popular resort, ignoring the long and arduous climb to it. So he built "Durlston Castle," a woebegone restaurant up there, and provided a series of stone seats on the way. Stone is the one material in Purbeck of which there is no stint, and thus the seats, dedicated to "Scott," "Shakespeare," "Stowell," and others, are of generous proportions. But the fine flower, the very acme of Burt's queer doings, is the "Great Globe" by the cliff-top. It is a model of the earth, done in local stone, weighing about 40 tons, and standing some 10 feet high. It is, of course, not a monolith, but is built up of some half-dozen slabs to form a perfect sphere. It is worked in low relief with the seas and continents of the world, and embodies a great deal of classroom information. The motto of Burt would certainly appear to have been "Thorough," for, having created the earth, he embarked upon a mass of information on the subject of the solar system, duly set forth on tablets around the flat space on which the Great Globe stands. Not even then was his work completed. The little weaknesses of mankind were not hidden from him, and the passion of Dick, Tom, and Harry, and of Brown, Jones, and Robinson, for inscribing their names upon every prominent object was duly taken into account. With a touch of sardonic humour he provided two blank stone tablets, on which all might scribble to their hearts' content. "Persons anxious to write their names will please do so on this stone only": so runs his inscription. And the request was obeyed by the confiding crowds, who did not know that at intervals Mr. Burt

sent a man with brush and pail to whitewash all their records. The Burt estates at Swanage and Tilly Whim, including the Great Globe, were offered at auction in June, 1921.

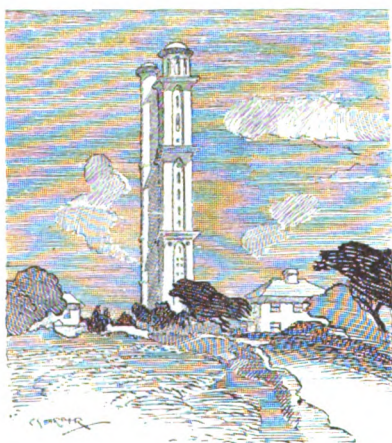
Most hideous of all "Follies" is the vast nondescript building erected by instalments in Knockholt village, Kent. It was always being partly demolished and added to by the amateur responsible for this abomination, Mr. Vavasour, a City of London silk merchant. As to the purpose of it I have no information. It is useless to criticise Vavasour's

Folly at Knockholt. The people there seem to think he was a benefactor, for they say "It made a lot of employment"; which shows the average rustic's outlook!

A completely typical specimen of a true "Folly," in the sense of a belvedere, a look-out over a view, or a place of delight, is found in the ornate and lofty tower in Charborough Park, Dorset, known variously as "Drax's Folly"



"RINGS HILL SPEER."

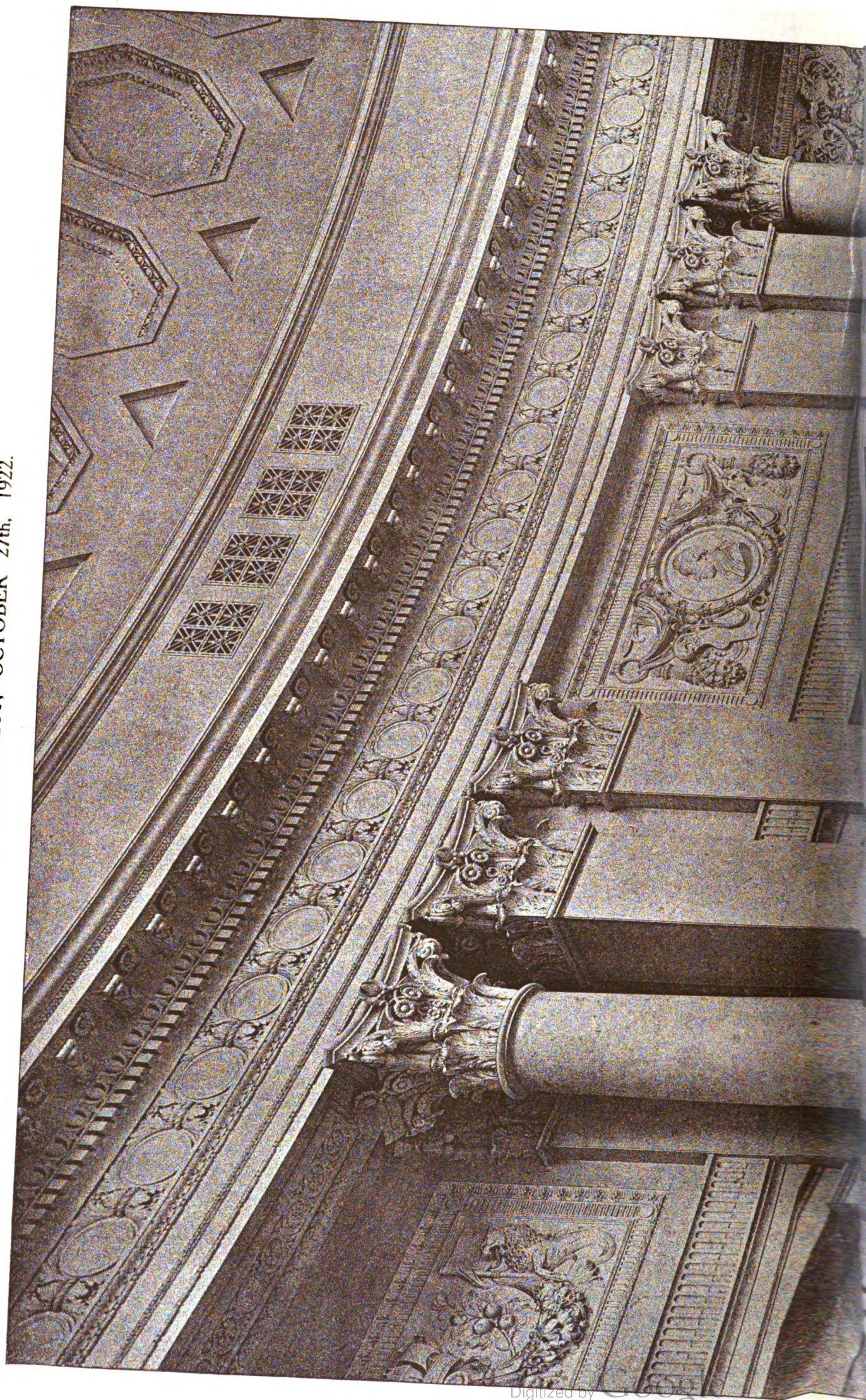


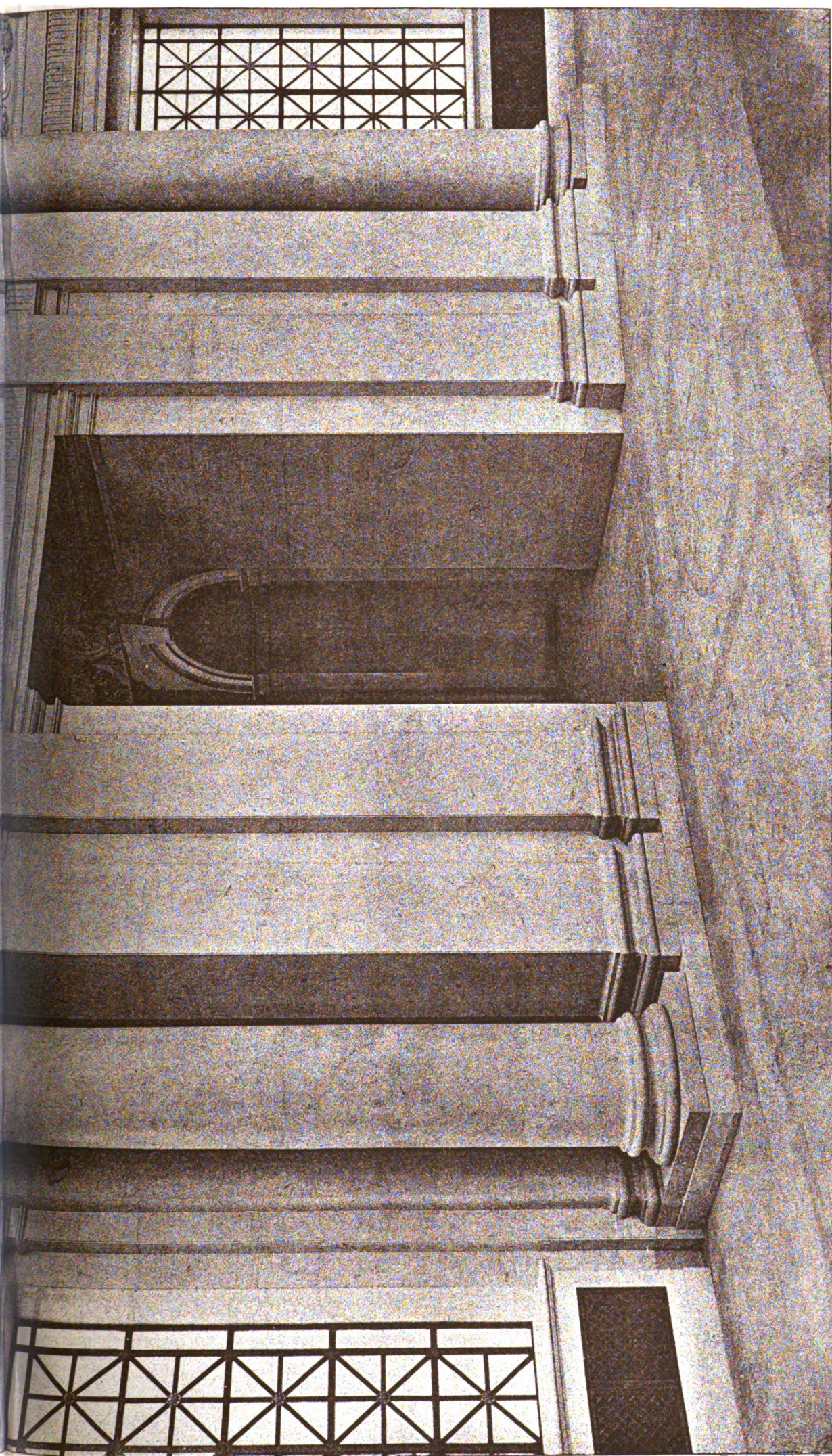
SWAY TOWER, OR PETERSON'S FOLLY.

or "Rings Hill Speer." It was built originally by Major Drax in 1796, and rebuilt in 1839 by that flamboyant squire of the many names, John Samuel Wanley Sawbridge Erle-Drax, M.P., after it having been struck by lightning. Originally 80 ft. high, it was rebuilt 40 feet higher. The style is an aggressive Strawberry Hill Gothic. In common with most of these buildings, this has become somewhat neglected. No one ever ascends it, and the long flights of stairs leading to the platform on which it stands, full in view of the mansion, are thickly grown with lichens and mosses. Mr. Thomas Hardy has made a feature of it in his novel, "Two on a Tower," in which it appears as Swithin St. Cleeve's observatory.

(To be concluded.)

THE ARCHITECT, OCTOBER 27th, 1922.



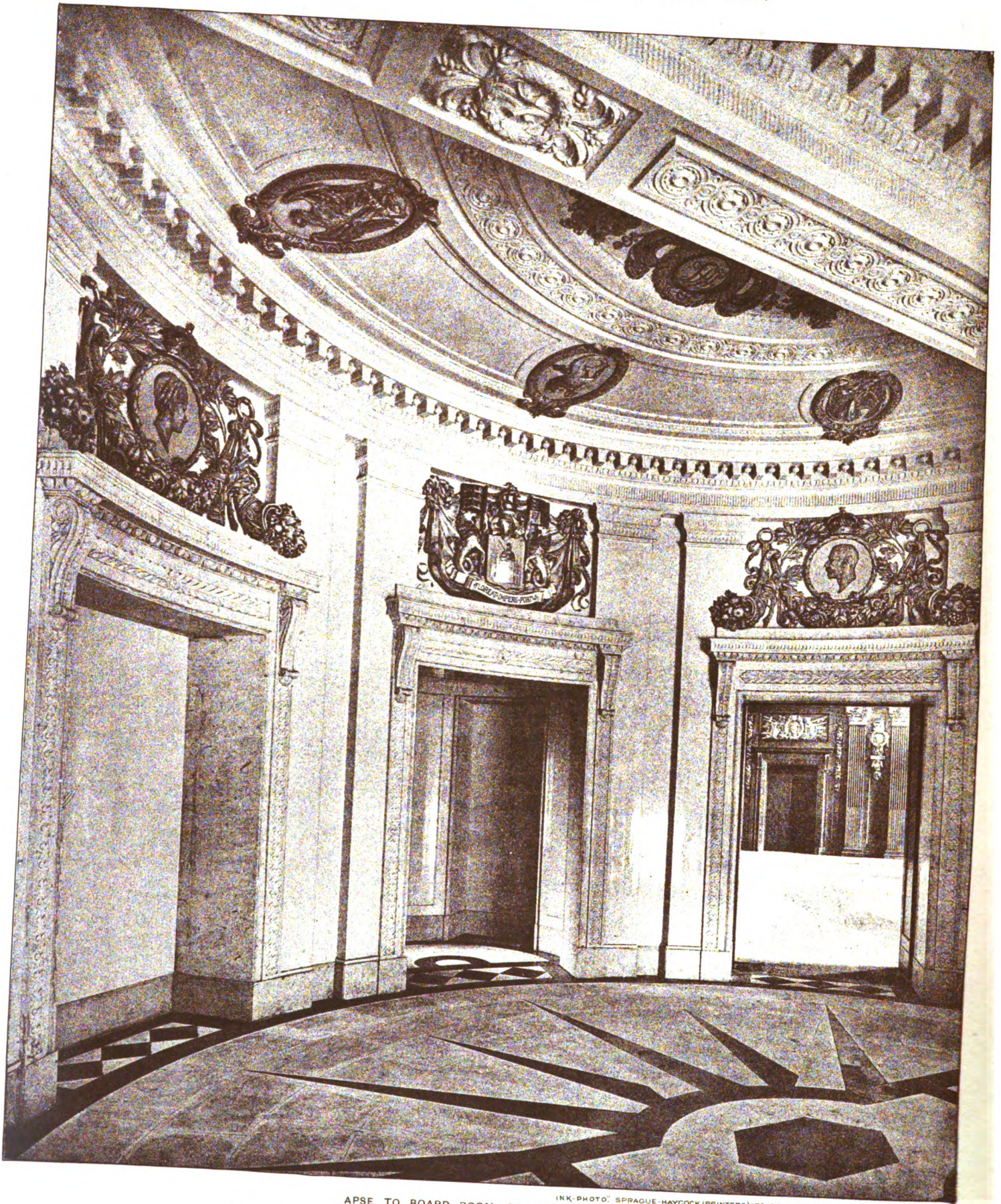


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DETAIL OF ROTUNDA.

PORT OF LONDON AUTHORITY BUILDING, TOWER HILL, LONDON.
EDWIN COOPER, F.R.I.B.A., ARCHITECT.

THE ARCHITECT, OCTOBER 27th, 1922.



APSE TO BOARD ROOM, SECOND FLOOR.

PORT OF LONDON AUTHORITY BUILDING, TOWER HILL, LONDON.

EDWIN COOPER, F.R.I.B.A., ARCHITECT.

THE ARCHITECT, OCTOBER 27th, 1922.



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GROUND FLOOR OFFICES.

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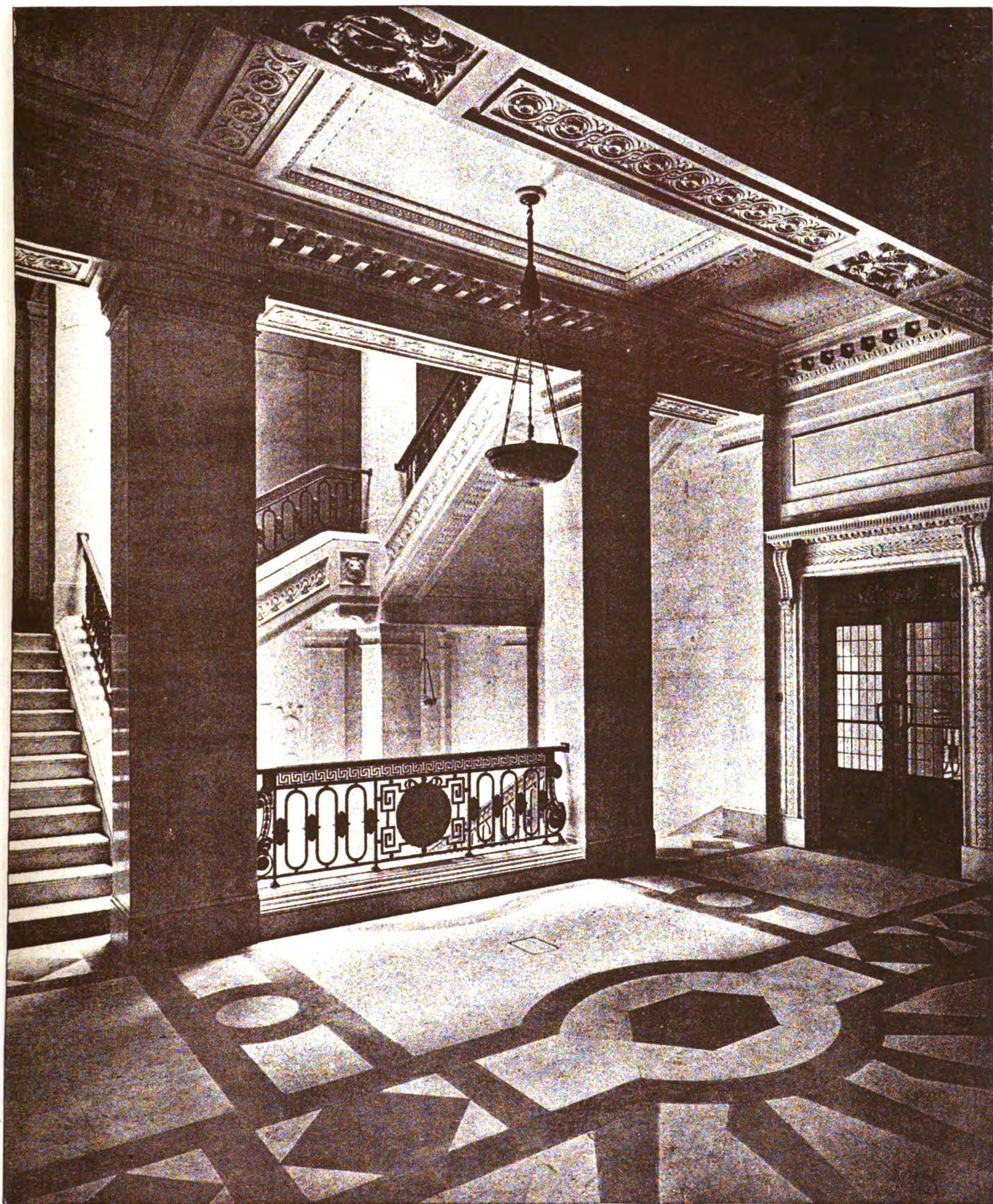
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GALLERY OVERLOOKING ENTRANCE HALL.

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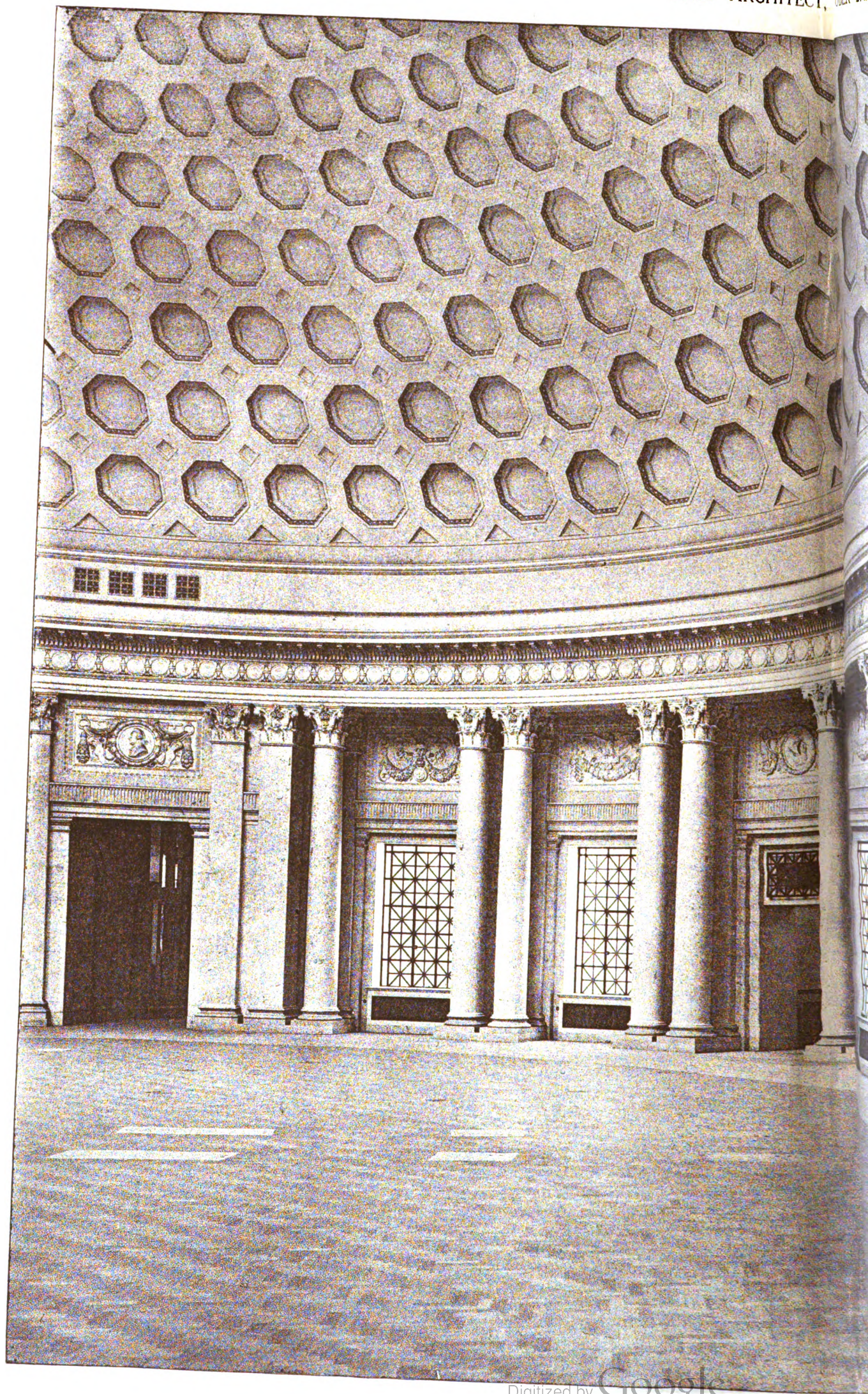


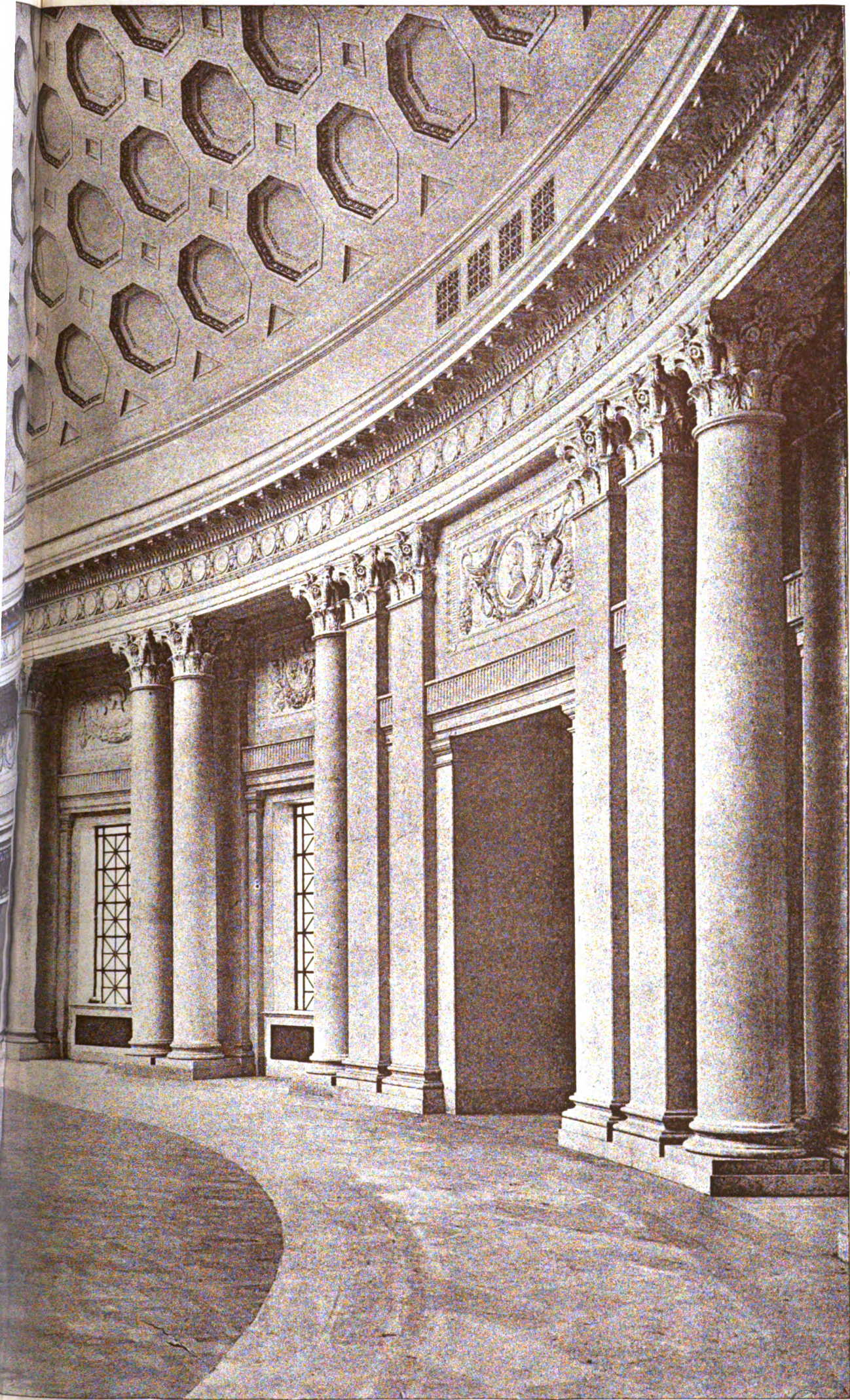
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STAIRCASE FROM APSE, SECOND FLOOR.

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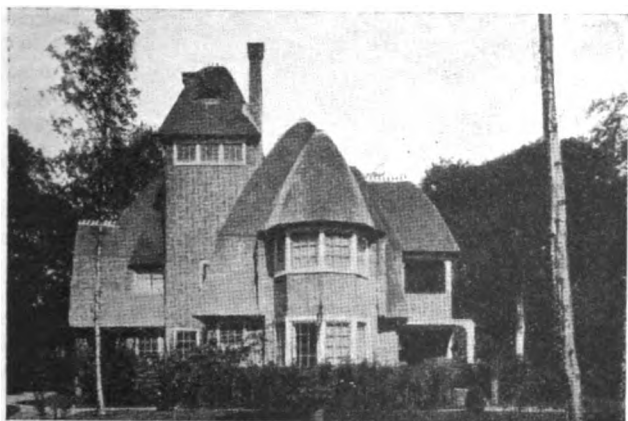
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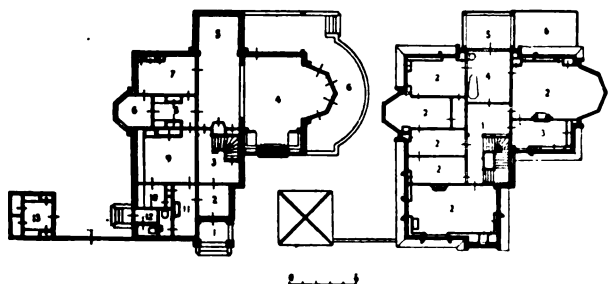
Modern Dutch Houses.*

We have received a volume of 232 pages of illustrations, with short descriptive text, devoted to modern Dutch houses, which are very interesting as they hold an intermediate position between German and English architecture, less exaggerated and, on the whole, in better taste than that of most modern German architecture, but crude when compared with the best that is produced in this country. The work illustrated may be described as belonging to three types. Firstly, that which may be said to be inspired by English work, like the house at Overveen designed by Messrs. Baanders, and "De Dierik" at Ouderlande, by the same firm; a house at Vogelenzang, by J. A. van Straten; any of which are indistinguishable in type from English work. Secondly, a type of building evidently composed with a view to obtaining unusual and original effects, some of which we illustrate. One is a house at Wassenaar, the general view of which shows a group of high beehive-like thatched roofs, combined with windows divided by sash bars into large squares. We give a detail view of the



"DE SHOUWENHOEK," WASSENAAR. C. BRANDES, Architect.

traditions, as is exemplified in the work of the older Dutch towns and the Dutch work in South Africa to which we recently called attention. A large number of the other works illustrated belong to a starved and nondescript order of work which we find throughout the Continent. These houses might well be small schools or institutional buildings. They possess neither good proportions nor interesting detail, and look like the work of men of no imagination or grasp of style who might have copied their details and

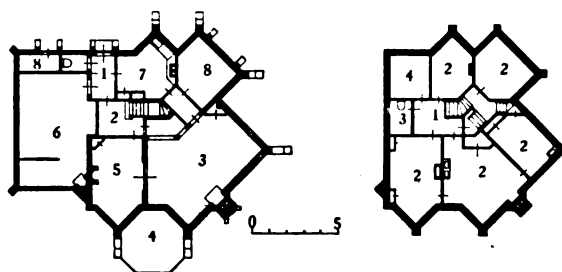
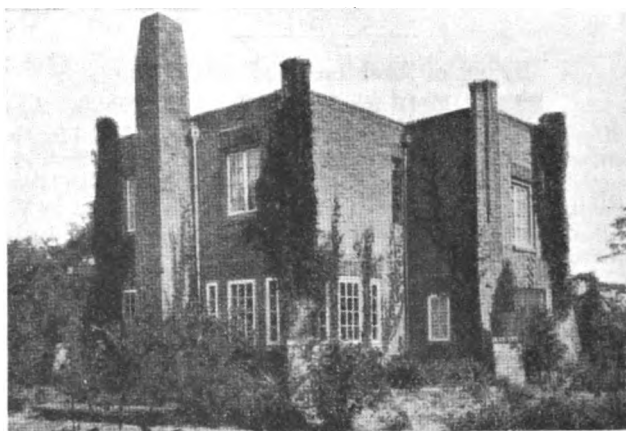


"DE SCHOUWENHOEK," WASSENAAR. C. BRANDES, Architect.

curious porch of this house, the gable of which is an intricate mass of ornamental brick and tile work, while the thatched roof is shaped into slight concave curves. In this country we associate thatch with low broad masses; here it is somewhat unfortunately combined with masses with a general effect: but there is an element of distinct picturesqueness in the detail, though this is of a somewhat weird character.

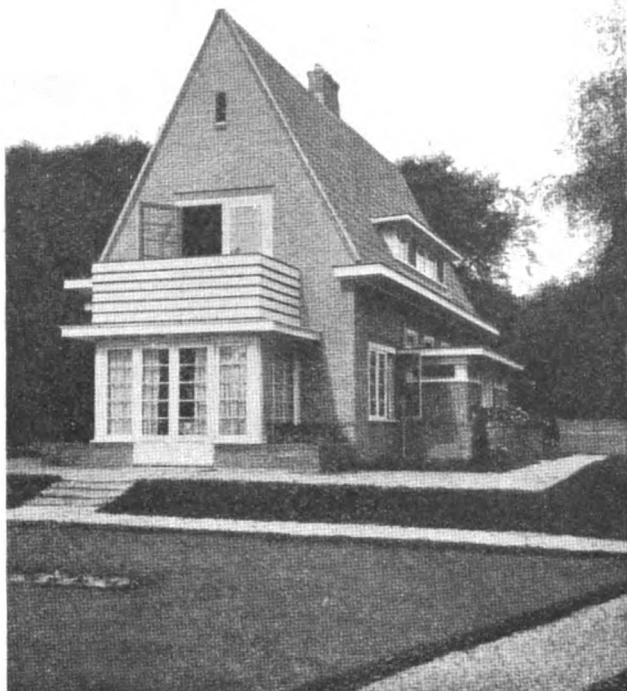
Of another type is the house at Hilversum, a flat-roofed brick structure distinctly pleasing in general effect. This building possessed an unusual plan, probably designed to obtain views over the surrounding country.

The little house at Bentveld stands midway between the first and second group in its type. Its general form is similar to that of many small English houses, but the shelf-like eaves project some couple of feet beyond the line of eaves over, while the balcony is somewhat crudely formed of wide lap boarding. In this and other of the designs shown the window openings are designed on a bigger scale than is followed here in most of our smaller domestic buildings. This is in accordance with Dutch



HOUSE AT HILVERSUM. J. C. VAN EPEN, Architect.

* "Het Moderne Landhuis in Nederland." By K. Sluyterman and A. J. Van der Steur. 's Gravenhage: Martinus Nijhoff.



HOUSE AT BENTVELD. PAUW & VAN HARDEVELD, Architects.

features out of works of reference without regard to any question of appropriateness.

A few houses are shown belonging to a more correct and strictly renaissance order, of which perhaps the best is "Zorgvliet," at The Hague, a house symmetrically grouped round four sides of a square hall, with well-designed columned verandahs on two sides and colonnaded recesses on the two remaining fronts. This is, judging by the examples shown, an unusual type of house in Holland.

We should say in general from the work shown that it is most successful where it has been more or less based on English precedent, though it hardly possesses the freshness and spontaneity of the best examples of modern English design.

Board of Architectural Education.

R.I.B.A. Medal for Schools of Architecture.

The R.I.B.A. Board of Architectural Education Medal for the best set of drawings submitted by post-graduate students exempted from the R.I.B.A. Final Examination, at the Exhibition recently held at the Royal Institute, has been awarded to Mr. P. B. Haswell, B.Arch., Liverpool University. Mr. Haswell will receive the Medal at the annual presentation of prizes at the R.I.B.A.

The drawings prepared by Miss E. G. Cooke, of the Architectural Association, received high commendation.

EVERARD J. HAYNES, Secretary,
Board of Architectural Education.

In connection with the erection of their new bank premises on the site of the old St. James's Vestry Hall in Piccadilly, W., the London Joint City and Midland Bank have, says the "Financial News," engaged the services of Sir Edwin Lutyens. Sir Edwin has designed a Piccadilly frontage in harmony with the church, which will individualise the new building. At the same time, it has been pointed out to the Westminster City Council that in the new plans submitted in conformity with Sir Edwin's scheme the design is of a much less expensive character than the first, and it is doubtful whether it could be made to comply with the requirements of the lease as to expenditure unless the interior is fitted in very expensive manner. Subject, however, to the consent of the County Council to the amendments, and to the observance of the undertaking to spend not less than £25,000 on building, the bank's new plans will be approved by the Westminster City Council.

The Metropolitan Water Board (Charges) Act, 1921.

Although the above Act, which has come into operation, does not revise the usual basis of charge for water for building purposes—namely, seven shillings per hundred pounds of expenditure, after allowance has been made at the Board's discretion for decorations, iron and steelwork (Section 17, 1907 Act) and only affects the cost of building directly, except so far as the cost of building itself provides a larger basis for the charge, if the supply is received by meter when the charges are increased by percentages varying from 36½ per cent. to 65 per cent., according to the greater volume consumed—the Act contains several provisions of interest to the profession.

The rebates for non-domestic property—i.e., property not subject to Inhabited House Duty, Section 9 of the 1907 Act—are revised and amplified by Section 9 of the new Act. The minimum rateable value on which a rebate must be made is now £20 in lieu of £300, and the rather vague provision of at least a rebate of 20 per cent., which might be extended to a maximum of 30 per cent. at the Board's discretion, is now made definite in the following table:—

| Rateable value of non-domestic property. | Rebate to be allowed. Per cent. |
|---|--|
| Not exceeding £1,000 | 25 |
| Exceeding £100, but not exceeding £5,000 .. | 30 |
| Exceeding £5,000 | 35 |

and by Subsection 1 of this Section property, which term includes part of a house or building which is occupied as a separate tenement for non-domestic purposes, of a rateable value between £20 and £100 may, if the Board think fit, be granted a larger rebate than 25 per cent. Provision is also made by this Subsection to protect the Board against the adverse effect of the various rebates on rateable values that approximate to the breaks in the schedule.

Section 13, which lays down that where two or more buildings connected by any internal means of communication or by any bridge, subway, yard, or passage, not being a public highway, are in the occupation of one and the same firm or person they shall be deemed as one tenement, having a rateable value equal to the aggregate rateable value of the separate buildings is of special importance in view of the increased rebates for the higher rateable values, although the assumption would naturally follow from the procedure under the 1907 Act in the case of supplies by meter, but it is a distinct advantage to get a definition of the rather vague phrase "which form one area for trading or manufacturing purposes" in that Act, a phrase which is perpetuated in Section 14 (2) (c) of the new Act dealing with supplies by measure.

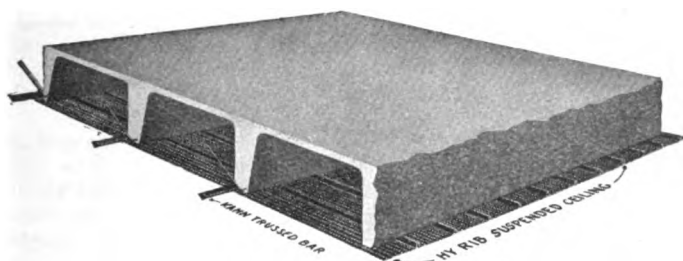
Sir Aston Webb will preside at the lecture to be given at the Royal Institute of British Architects on Thursday, November 16, at 8.30 p.m., by Sir Isambard Owen, on the Cathedral of Rheims. Sir Isambard made a study of the Cathedral during several years before the war, and has a particularly beautiful set of lantern slides illustrating it.

The hall is being lent for the occasion, and a collection will be made on behalf of the British Empire Fund towards the restoration of this, the sister church of our Westminster Abbey, which, but for the sacrifices made on the soil of France by all the allies, might have been to-day in the same sad condition.

The Society for the Protection of Ancient Buildings is giving its help in organising the appeal, as it approves the lines on which the repairs will be carried out by the French Government, which has offered to place a tablet in that portion of the church reconstructed by the offerings of our people as a memorial to our fallen and a tribute of affection for France. The patron of the Fund is H.M. Queen Alexandra, the President is the Duke of Portland, the Chairman the Lord Mayor of London, and amongst the Vice-Presidents are the French Ambassador in London and the British Ambassador in Paris.

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Points in the Law of Heating Engineers' Contracts.*

By Mr. Robert Fortune, Barrister-at-Law.

The question I have been asked to discuss this evening is the position of a Heating Engineer employed by the building owner or his architect in the character of consulting engineer to supervise the installation of suitable heating apparatus as part of a general building on a given site. Unless the contract of employment is one which the parties contemplate is being about to last for more than a year, so as to fall within section 4 of the Statute of Frauds, no written retainer is necessary, but such contracts when made with corporations or public bodies must be in the form required by law for such contracts.

Now the authority of such a consulting engineer must depend upon the terms of his appointment. He may be employed to consult with and advise his employer to prepare drawings and obtain tenders and to superintend the carrying out of the scheme approved by the employer or his architect.

Generally an engineer has no implied authority to enter into a formal contract so as to bind the employer, although the tender may be for a sum not exceeding that which the employer is willing to expend, since the preparation of a formal contract is a matter for a lawyer. On the other hand, the contract between the building owner and the contractor may provide that the building owner shall have the right to nominate or select certain specialists to execute special works or supply special materials, for which provisional sums or prime cost items are received in the contractor's contract sum, and to employ the specialist independently of the contractor; and it often happens that the building owner or his architect negotiates with such specialist the details of such special work before the order for it is placed, and this has given rise to very difficult questions as to whether the principal placing the order was, in fact, the contractor or the building owner, and whether the architect had any authority in negotiating a contract with the specialist to bind the building owner, or the contractor, in accepting the specialist's price, any authority to contract with the specialist as the agent of the building owner.

In *Leslie & Co., Ltd., v. The Managers of the Metropolitan Asylums District*, 68 J.P. 86, by a contract between the contractors and the building owners, it was provided that "the managers (the building owners) reserve to themselves the right to employ other parties to execute the works for which provisions are made, and to deduct the full provided amount (i.e., the prime cost plus 10 per cent.) thereon from the contract sum. In such cases the contractors are to allow such parties every facility for the execution of their several works simultaneously with their own. The managers are to be at liberty to omit any provisional sums or quantities. The contractors are to pay the sub-contractors the amount provided in the contract for such purpose, or less or more, as may be certified, and the payments thus made will be considered as work done by the contractors, and will be included in the certificate to the contractors next following such payment. No payment is to be made to such sub-contractors, except upon the architect's certificate. The contractors are to pay such amount as may be certified from time to time within seven days from the date of the certificate, and should the contractors neglect or refuse to make such payment within the said period, the managers shall be at liberty to pay the amount thereof to such sub-contractors, and to deduct from the contract sum the gross amount which the contractors have included in their estimate in respect of such work and their profit thereon, the amount so to be deducted not being less in any case than such amount so certified." Chimney stacks and heating apparatus were to be provided by specialists. Specialists were appointed to execute this work by the architect to give the orders, and did so, and the work was executed. On a claim by the building owners against the contractors for damages for delay caused by these specialists it was held that the specialists were employed by the building owners, and that the architect's negotiations with the specialists were on behalf of the building owners and not of the contractors.

In *Hobbs v. Turner*, 18 *Times Law Reports* 235, a building contract provided that the work should be done for a lump sum and that certain provisional sums for work to be done by specialists should "be paid and expended at such times and in such amounts and to and in favour of such persons as the architect shall direct, and sums so expended shall be payable to the contractor without discount or deduction by the employer to the said artists or tradesmen." The architect selected H. to supply certain of this special work, and this work was sent and invoiced and debited to the contractor. The architect certified

for the amount to which H. was entitled, and sent the certificate direct to the building owner. H. sued T., the building owner, on the certificate, and it was held that the building owner selected the specialist and might pay him any sum he pleased, and, on the construction of the contract, the contractor was only the agent of the building owner in ordering such work, and as there was nothing in the sub-contract restricting H.'s rights to having recourse to the contractor, the building owner was liable.

But in *Hampton v. Glamorgan County Council*, 1917 A.C. 13, the facts were as follows: A builder contracted with a county council to build a school in accordance with the specifications and directions of the council's architect for a lump sum of £13,600 the specification containing certain provisional items, including the following: "Provide the sum of £450 for a low-pressure heating apparatus," and a hot-water engineer submitted a scheme to the architect for the heating of the school for £391, and by the direction of the architect this scheme was accepted by the contractor. During the progress of the work the builder paid to the engineer £200 on account, but he was unable to pay the balance.

In an action by the engineer against the council as building owners for the payment of the balance of his account, the House of Lords affirming the Court of Appeal which reversed *Horridge, J.*, who had followed the case of *Crittall v. London County Council*, 75 J.P. 203, held upon the construction of the building contract that the builder was to erect the school for a lump sum, including, if required, the heating apparatus up to a cost of £450, and that the builder, in employing a specialist to put up the heating apparatus, was acting as a principal and not as the agent of the building owners, and that the action accordingly failed.

In every case of contract it is necessary to keep firmly in mind with whom the contract is, and to be able to point to the evidence which establishes privity of contract—that is to say, a contractual relationship between the two contracting parties, the essence of a contract being that it is a relationship established by an offer by one party and the acceptance of that offer by the other party constituting an agreement upon certain terms.

As was said by Lord Esher, M.R., in *Le Lievre v. Gould* (1893), 1 Q.B. 491: "The question of liability for negligence cannot arise at all until it is established that the man who has been negligent owed some duty to the person who seeks to make him liable for his negligence. What duty is there when there is no relation between the parties by contract? A man is entitled to be as negligent as he pleases towards the whole world if he owes no duty to them."

On the other hand, a contracting party may, by contract, protect himself from almost every liability short of fraud. Thus a shipowner may, by an exception covering himself from liability for losses to consignors or consignees by "any act, neglect or default whatsoever" of servants, protect himself from liability for losses even by the felonious acts of his own servants. *Marriot v. Yeoward* (1909), 2 K.B. 987.

The case of *Hampton v. Glamorgan County Council* to which I have referred shows the great hardship which may be cast upon a specialist who has entered into a contract with an insolvent contractor where the building owner does not desire to assist the specialist to obtain payment, although the whole of the specialist's work may have been satisfactorily performed, and emphasises the importance of the specialist having a contract which cannot be disputed as having been made with the building owner either by the owner himself or by his architect or consulting engineer under an express authority given for that purpose.

Although the engineer is the agent of the building owner in making drawings for the builder for the purpose of carrying out the work, he has no implied authority to warrant to the builder that they are correct or that the work can be executed according to them, nor will any such warranty be implied against the engineer or the building owner, but such a warranty may be expressly created or may be expressly negated by appropriate words.

But the contract may be to do only the work described in the quantities and in the drawing. Thus, when a building contract provided that the work was to be done for a lump sum "according to the plans, invitation to tender, specification and bills of quantities," it was held that the quantities defined the amount of work to be done for the lump sum, and that for additional work the contractor was entitled to additional payments. (*Patman and Fotheringham, Ltd., v. Pilditch*, 2 *Hudson's B.C.* 4th Edn. 368.)

An engineer employed to superintend the carrying out of work must be careful to see that the terms of the contract between the contractor and the building owner are strictly carried out, and

* Abstract of a paper read at the autumnal general meeting of the Institution of Heating and Ventilating Engineers (Incorporated).



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that any extras or deviations ordered by him are ordered in accordance with the terms of the contract or that express instructions therefor are obtained from the building owner, unless the engineer has express power to order such extras or deviations as in his discretion he may deem necessary. An engineer has no authority when there are omissions from the drawings to order those omissions as extras under a power to order extras, if they are works indispensably necessary to complete the contract. Neither has an engineer any authority where the drawings are impracticable to order, as an extra, work necessary to make them practicable.

An engineer exceeding his authority is liable to be sued by a contractor for breach of warranty of authority for what the contractor has lost by relying upon the engineer's authority, and if an engineer, when authorised to contract as agent, does not disclose his principal but contracts as a principal he will be personally liable upon the contract.

An engineer when employed as the skilled agent of the building owner for reward is bound in law to possess an ordinary and reasonable degree of skill in his profession, and to act therein with reasonable care and diligence for the work which he undertakes to do.

An engineer must also use every care to select competent employees to assist him and to see that they receive proper and adequate supervision; he must take reasonable steps to examine the site, ascertain and comply with all general Acts of Parliament and all bye-laws and regulations lawfully made which relate to the site in question and to work of the class which he undertakes to plan and see executed, and he must see that any necessary approval of plans by any public authority is obtained. He should also make himself acquainted with any private or special rights affecting the site in question, upon which it may be desirable that the building owner should seek legal advice.

His designs, estimates and quantities must be in accordance with the instructions of the building owner and of reasonable skill and accuracy, and whilst he does not guarantee the solvency or capacity of the builder, it is his duty to make reasonable inquiry as to the builder's solvency, and not to allow the building owner to contract with anyone whom he has reason to suspect as being unable to carry out the work in a satisfactory manner.

Where designs are prepared by the engineer to be submitted for approval and there is no employment in express terms, such designs are in the nature of an offer leading up to a possible contract which may or may not be made, but if not made the engineer cannot obtain payment for such designs unless payment has been stipulated for in express terms, or unless the designs are used by the building owner, even if such user is not for the building. In *Landless v. Wilson*, 8 Ct. of Sess. Cas. 4th ser. (Rettie) 289, a building owner was sued for the cost of preparing plans. The defence was that they were got merely on approbation and that payment was only to be made if they were used. It was true that they had not been used for building, but the building owner used the plans for the purpose of showing intending purchasers of the land how it could be developed, and it was held that the building owner must pay the architect. It is open to an engineer submitting a scheme by request to do so upon the express terms that unless returned within a certain time, or if used or copied, it shall be paid for.

Mere examination or approval of a plan which the building owner is personally incompetent to decide upon by mere inspection, will not relieve an engineer for negligence therein, but to make him responsible the work in question must actually have been entrusted to the engineer; and if the building owner insists upon using his own judgment in preference to that of the engineer in matter entrusted to the engineer, or ignores the advice of the engineer, the latter should be careful to make clear in writing to the building owner what the consequences will probably be, and the engineer will then become the mere agent of the building owner to carry out his orders. Likewise an engineer is not liable in respect of a new or untried invention which he is ordered to use by the building owner. Thus, where T. employed G., an architect, to prepare plans for and superintend the erection of model lodging-houses after the latest improvements, and instructed him to put in a new patent concrete roofing, which was much cheaper than lead or slate, and the concrete roofing proved a failure and had to be removed and replaced and T. brought an action against G. for negligence, Erle, J., charged the jury that although failure in an ordinary building was evidence of want of competent skill, yet if out of the ordinary course an architect is employed in some novel thing in which he has no experience and which has not the test of experience, failure may be consistent with skill. (*Turner v. Garland & Christopher*, Hudson's B.C. 4th Edn. 1.)

But an engineer on account of his skill and professional knowledge, and although the known agent of the building owner, may, by the contract between the building owner and the con-

tractor, be placed in the position of a quasi arbitrator, and as such has the duty of acting impartially in certain questions or disputes which may arise under the contract, and *when acting in such a capacity* he is not liable for lack of skill, ignorance of law, or negligence towards the contractor or the building owner.

In one case it was decided that where a building contract provided for payments upon certificates of the architect, and that the architect's certificate as to the final balance due should be conclusive, and the contract further provided for arbitration in certain events until the parties brought arbitration into operation by their acts, the decision of the architect was final.

But in *Robins v. Goddard* (1905), 1 K.B. 294, R. contracted with G. to do certain building work. The contract was in the form approved by the R.I.B.A. which provides (*inter alia*) that "No certificate of the architect shall be considered conclusive evidence as to the sufficiency of any work or materials to which it relates, nor shall it relieve the contractors from the liability to make good all defects." There was also an arbitration clause. R. brought three actions against G. on certificates of the architect. G. pleaded that the certificates were in respect of work done and materials supplied not in accordance with the contract, but defective and unsuitable, and it was held that the arbitration clause prevented the certificate from being final, and that thereupon G. was entitled to set up his defence and counterclaim.

In *Hickman & Co. v. Roberts exors.* (1913), A.C. 229, a building contract provided that the decision of the architect of the building owners on all matters in relation to the work should be final, and that payments should be made on the certificate of the architect. The architect, under a misapprehension of his position, allowed his judgment to be influenced by the building owners and improperly delayed issuing his certificates in accordance with these instructions.

After the completion of the work and the expiration of the period of maintenance, the contractors sued the building owners for the final balance alleged to be due under the contract, but the final certificate was not issued until after the commencement of the action, and it was held that the building owners were precluded from setting up as a defence to the action either that the issue of the certificate was a condition precedent to the bringing of the action or that the certificate was conclusive as to the amount of the claim.

A consideration of these cases show how important it is that the engineer should keep clearly in his mind in what capacity he is acting for the moment, and realise that whilst merely acting as the agent of the building owner his duty is to him as his employer, but in so far as he is called upon to act between the building owner and the contractor his duty is that of a quasi arbitrator, and he must hold the scales impartially, and whilst he does so the Court will not question his discretion and judgment, but if he allows himself to be swayed from this course, however honestly, by pressure of any sort, the Court will not uphold his authority.

When, therefore, in building contracts there is a condition that the engineer shall give his certificate of the work done and of the sum due, no claim can be made for payment under the contract unless the certificate be given; though the engineer unreasonably refuses to give such certificate, but the certificate of the engineer may be subject to review, in which case it will not be conclusive.

Thus, in *Eaglesham v. McMaster* (1902), 2 K.B. 169, clause 26 of a building contract provided that "the certificate of the architect is a condition precedent to the contractor's right of action against the employer." Clause 27 provided that "the architect is to be the sole arbitrator or umpire between the employer and the contractor, and is to determine any question, dispute or difference that may arise either during the progress of the work or in determining the value of any variations that may be made in the work contracted for, and the certificate of the architect's decision upon such question, dispute or difference shall be final and binding between the employer and contractor and without further appeal whatsoever." The contractor was paid the whole of the amounts which were certified by the architect as due to him; but he alleged that he was entitled to a further sum which he claimed to recover in this action. He had made no application for arbitration under clause 27. It was held that the provision of clause 26 making it a condition precedent to the contractor's right of action that he should have the certificate of the architect that the amount claimed was due to him, was unaffected by clause 27, and that in the absence of a certificate the plaintiff was not entitled to maintain the action unless he could show (and this he failed to show) improper dealing between the employer and the architect.

And where money is certified as due upon an engineer's final certificate given pursuant to a contract for work done, the building owner may be sued upon a specially endorsed writ and an application for summary judgment may be made as provided for by the Rules of the Supreme Court.

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A West of England Industry.

At the invitation of the chairman and directors, we attended a particularly interesting function when Dr. Macnamara, the Minister of Labour, cut the first sod of the new railway which is to link up the Great Western Railway with the quarries of the Leckhampton Stone Co., near Cheltenham. A large company journeyed out from Cheltenham to Charlton Kings to witness the ceremony. In a workmanlike manner, the Minister of Labour proceeded to remove his coat and tuck up his sleeves; a handsome silver spade, suitably inscribed, but eminently unsuitable for the job, was handed to him, whereupon Dr. Macnamara proceeded to cut the sod with considerable energy, with the natural result: that the spade buckled up. An ordinary iron spade was substituted, and the work was successfully carried out. The company which has been formed to work these quarries (one of the oldest quarries in the country) is mainly controlled and worked by ex-service men. The chairman, Admiral Sir Charles Coke, presided at the luncheon which followed the ceremony, and proudly stated that the quarries contain many millions of cubic feet of the purest limestone to be found in this country: it was estimated more than enough to rebuild London if required. The work on the new line, and the increased amount of work which would naturally follow, it was hoped, would find ample employment for many of those men in the district who, having served their country, had returned to contend with far greater difficulties than they had been through in the war. Dr. Macnamara, on rising, said the opening of the quarry would no doubt give employment to those who would otherwise walk in the shadow of distress. The last two years of depression and unemployment had been more grave and more persistent than at any time in our history. The figures of unemployment showed, however, that since June of last year there had been a recovery, although a slow recovery. The situation would, he was afraid, shortly worsen by seasonal depression, but it was believed that matters would be brighter in the spring. The thing to do was to get trade revived. He was glad that municipalities had behaved most patriotically in submitting schemes representing many millions of pounds. There was every need for hearty co-operation of all parties during the coming winter. In addition to the supply of stone for building purposes, the company are putting in a battery of lime kilns, and the purest lime in the Kingdom can be supplied. There is hardly a trade carried on in this country which is not in some way dependent on lime; the future, therefore, of the Leckhampton Stone Quarries Co. is indeed a hopeful one; and with sound and enterprising management, the financial results should be unquestioned.

Marryat-Scott Lift Installations.

Messrs. Marryat & Scott can trace their engineering business pedigree for more than half a century. But their present connection with the lift world is of more recent years, when they decided to make their name stand for quality. The wisdom of that course has proved itself by an enormously increased turnover in spite of the fact that they prefer to sacrifice an order if the price is cut so fine that quality must suffer. Every detail of lift construction is studied with a view to discovering faults and devising improvements. They set themselves to get every problem right, and never to return to the old troubles. As an instance of the thoroughness of their methods may be mentioned the fact that they have appointed a commissioner whose sole duty is to study recent coroners' inquests and to find out what the fault was which led to the accident. When the trouble has been ascertained it is the business of their experts to eliminate its possible occurrence in any work of their own.

We recently inspected three Marryat-Scott installations in London, and were impressed by the individual study and skill demanded by each. In America they build their buildings round their lifts; in consequence a high degree of standardisation is attained. In this country, on the other hand, the lift has to be made to adapt itself to the building.

The first installation comprised six machines at the new building of the London Assurance Corporation, close to the Mansion House. Here the architects, Messrs. Campbell, Jones, Son, & Smithers, were wise enough to give Messrs. Marryat & Scott an unusual amount of freedom. The result is a noteworthy success; whether it be in the enclosure work to the passenger cars, the ingenious self-raising and falling back to the book and bullion hoists, or the very push-buttons—all betray individual care.

The four electric lifts at the offices of the Provident Mutual Assurance, in Moorgate Street, were on more standard lines. Here were demonstrated the features of their equilibrium safety gear, including a device which comes into operation in the event of any undue stretching of the ropes. All these lifts are fitted

with their entire machinery housed most compactly immediately above the lift shaft.

The final visit was to the busiest passenger lift in London—one of two installed for Messrs. Bourne & Hollingsworth in Oxford Street. During a period of twenty-four working days in July and August last this lift made the extraordinary total of 44,500 journeys. It might almost be said that during business hours the lift is in perpetual motion. Judging by the smoothness of its running a Marryat-Scott lift thrives on work.

A tour of the kind just described is more convincing as to merit than any number of catalogues or exhibition displays.

The "Glow-Worm" No. 2 Boiler.

The "Glow-Worm" has been designed to serve as a small and inexpensive boiler to provide a constant supply of hot water more economically than by the use of a kitchen range. There are, of course, already on the market many independent boilers which set out to achieve the same thing. The "Glow-Worm" No. 2 size marks the latest developments. It has only just been finished, after long and costly experiments, and has met with instantaneous success, having been adopted by some of the biggest gas coke companies in London and the provinces after searching tests by the London Coke Committee. The No. 2 size is 5 inches taller than the No. 1, but is of the same design.

Small type boilers intended for similar purposes are usually either just horseshoe type or have an ordinary circular water jacket with smoke outlet at the top of the hot plate, which in consequence is very small.

The "Glow-Worm" has its smoke outlet at the back. It has a water-baffle, and as a consequence the heat gases are projected forward before passing through the flue. The result is that the large hot-plate, no less than 16 inches in diameter, can be actually used for boiling and cooking operations. It can boil, not merely heat, and is guaranteed to do this. Further, the "Glow-Worm" is made with a shaking bottom, for use with anthracite as well as coke. This marks a new feature. Its actual water heating capacity is remarkably high.

Correspondence.

Ryde (I.W.) Pavilion Corporation.

To the Editor of THE ARCHITECT.

SIR,—I am directed to send you the following copy of a notice which has been issued by the Royal Institute of British Architects:—

The Competitions Committee desire to call the attention of Members and Licentiates to the fact that the conditions of the above competition are unsatisfactory. The Competitions Committee are in negotiation with the promoters in the hope of securing an amendment. In the meantime Members and Licentiates are advised to take no part in the competition.—Yours, &c.,

IAN MACALISTER, Secretary.

A new Mixed Junior Council School for the Glamorgan Education Committee is to be erected at Hendreforgan, Glamorgan, from the designs of the county architect, Mr. D. Pugh Jones, M.S.A. Messrs. Davies and Lloyd, of Senghenydd, whose tender was £4,196, are the builders.

It is officially announced that the contract for Southampton's huge floating dock has been secured by Sir W. G. Armstrong, Whitworth and Co., Ltd. This dock, which is by far the largest ever projected, will be nearly 1,000 ft. in length, and will be able to accommodate even the mighty *Majestic*, the greatest vessel afloat, which has a length of 912 ft., and a gross tonnage of 56,000.

The building of the dock, which will occupy eight or nine months, will provide much needed employment for thousands of workers on Tyneside. Upwards of 20,000 tons of steel will be required for the work.

It is understood that the dock will be constructed at the great Armstrong shipyard at High Walker on Tyne. This shipyard, originally laid down for the building of war vessels, has, since the war, been reconstructed as a mercantile yard, and recently a number of notable vessels have been built there. Among those of especial interest are:—The Cunard liners *Ausonia* and *Ascania*, the P. & O. liner *Mongolia*, the Great Eastern Railway steamer *Malines*, and the Bergen Steamship Company's passenger liner *Leda*, together with some of the largest oil tankers in existence, and a number of cargo boats and motor ships fitted with Armstrong Sulzer Marine Diesel engines.

It was at this yard that the famous Cunarders *Aquitania* and *Berengaria* were recently reconditioned and converted for oil burning with such gratifying results.



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The Holophane Service in Illumination.

Last week a visit was paid by the Scientific, Technical and Trade Circle of the Institute of Journalists to the works and laboratories of Holophane, Ltd., where the following interesting account was given of the application of science to illumination.

Introduction.—The study of the principles of artificial lighting during recent years has led to agreement on several fundamental principles which are necessary in order to secure satisfactory illumination—namely, (1) sufficient light, (2) avoidance of glare from exposed mantles or filaments, and (3) avoidance of inconvenient and troublesome shadows.

Prior to the introduction of electric light the public had only experience of such sources as the candle, the oil lamp and the flat-flame gas burner, which were of low intrinsic brilliancy. But when electric incandescent lamps were introduced, it became apparent that their brightness (as much as 400 candles per square inch for the carbon filament) was too great to be looked at with comfort. It was largely this consideration that led to the introduction of Holophane glassware.

When the metal filament lamp arrived with a still greater brightness (of the order of 800 candles per square inch), proper shading became even more essential. More recently still, the introduction of the gas-filled electric lamp, with a still higher order of brilliancy, emphasised yet more need for special measures to avoid glare.

At the same time, people came to realise that the distribution of light from most illuminants is not suitable for many lighting problems; the ordinary type of electric incandescent lamp with straight filaments, for instance, gives little light immediately below the lamp, where it is chiefly needed. Most of the light is directed horizontally. The function of a scientific form of globe or reflector must therefore be to direct the light in a judicious manner, as well as screening the filament or mantle, or diffusing the light over the surface of the shade so that it has only a moderate brilliancy, not irritating to the eye. This has been borne in mind in the many varieties of Holophane glassware designed and introduced.

Historical Notes.—It may be interesting to recall that some of the earliest work in this country in the direction of endeavouring to secure control or direction of light rays over a particular area by means of prismatic lenses was done by Mr. A. P. Trotter, who devised such glassware in panels for use in the lanterns of arc lamps which were then just coming into use. The light control, however, which was sought by Mr. Trotter, did not approach by a long way the ideals which were at the same time occupying the attention of MM. Blondel and Psarondaki in Paris. The outcome of their research evolved the scientific prismatic lighting glassware which they named Holophane, and the high value attached to this invention is manifested in the awards which were made to them by the highest scientific bodies in the world. Subsequently these ideas were developed to a more practical stage by the Holophane Company, with whom Mr. O. A. Mygatt is associated, and the development of scientific treatment of illumination is largely due to his initiative. The Holophane Company has based its efforts on all this collective experience going back over a period of nearly thirty years, but is constantly adding new designs and introducing new developments to keep pace with progress in illuminants and greater knowledge of illuminating engineering.

The Principles of Holophane Glassware.—Assuming that the requirements of globes and reflectors are as stated above, there are various ways in which they may be met. The Holophane system is based on the use of prismatic glass, and in the original designs involved the use of two kinds of optical prisms. The interior flutings accomplish the diffusion and breaking up of the light rays. The horizontal exterior prisms have a second distinct purpose—namely, to direct the diffused light in a suitable manner, mainly in useful downward directions. These outside prisms usually consist of four independent surfaces, the angles and inclinations of which are accurately calculated to give the desired distribution of light.

The later introduction of reflectors with an inner smooth surface and an outer surface formed of vertical prisms acting by total internal reflection marked a distinct advance. The feature of this method is the accuracy with which any desired distribution of light can be obtained. This distribution is determined largely by the contour of the reflector as well as the nature of the prisms, and the percentage of light that can be reflected by "total internal reflection" is extremely high. The absorption by globes is only about 12 per cent. on the average, while in reflectors an absorption of only 5 per cent. is found, which is highly satisfactory. Each Holophane globe, bowl or reflector gives a certain distribution of light adapted to a specific purpose. Diagrams illustrating these results are produced in the company's laboratories, and are furnished to users, so that the resultant

illumination in any installation can be predicted, and units spaced out to give uniform illumination.

The Holophane engineers were the first to recognise the need for a compact range of reflectors of different sizes giving the types of light distribution required to meet satisfactorily all normal commercial conditions.

These requirements were found to group themselves naturally into three classes of lighting service; consequently, three types of Holophane reflectors were designed, which are now the well-known extensive, intensive and focussing types, and which are universally used in modern practice.

Many special units adapted to the lighting of streets, shops, churches, factories, etc., have been developed, and more specialised devices, amongst which the new "Artificial Daylight" units (furnishing a light suitable for colour matching) and the Holophane motor-car headlight may be mentioned, have also been evolved in the Holophane laboratory. Special literature giving details of such special devices is issued.

Application of Principles of Illuminating Engineering.—One point that was realised very early in the history of Holophane was that the mere supply of lighting appliances without information how to use them to the best advantage is not satisfactory. A feature has been the recognition by leading concerns interested in illumination that service must also be rendered besides supplying goods. Accordingly, the company is prepared to plan out lighting schemes and offer advice, besides supplying globes and reflectors, and it has consistently aimed at keeping abreast of progress in illuminating engineering, as exemplified by the discussions before the Illuminating Engineering Society. Through the discussions that have taken place since the movement originated fourteen years ago, not only have the fundamental principles of good lighting become much better understood, but the special requirements for different classes of buildings and various processes have been elucidated. Agreement as to the best practice is attained by such discussions, in which both lighting experts and actual users of light take part.

Through this educational movement the public has been taught to appraise good lighting at its proper value in the interests of health, safety and efficiency of work. The propaganda of Holophane, Ltd., in the form of pamphlets, lectures and demonstrations, has contributed very largely to the spread of this better knowledge of the benefits of good illumination, and the company has thus rendered useful public service.

The paper was illustrated by lantern slides showing various points on correct and incorrect illumination.

New Books.

"Steam Heating." By Frederick W. Dye. London: E. and F. N. Spon, Ltd.

Mr. Dye's name carries weight with it for such a subject as the present one; but there is something more than his name concerned, as the text of the work has a convincingness about it which is in itself a recommendation. Of course, one might, at the very commencement, criticise the use of the term "liquid water," for whilst everyone knows that ice, ordinary water, and steam are all different forms of H_2O , yet it is customary to call the middle state just "water." In a succession of chapters the author deals with Central Heating, One-pipe and Two-pipe systems, Overhead (or drop) system, the use of High-pressure Boilers, Exhaust Steam, Vapour and Vacuum systems, Unit system, etc. Also there are chapters upon heating water by steam and cooking by steam.

The book is full of practical hints; and not hints alone, for that implies scrappiness, whereas the treatment is far removed from anything of a casual nature.

There is a slight error on page 39 (lines 10 and 11), where in each case "100" should read "1,000"; on page 54 (line 4), where "same" should read "steam"; and the second table on page 129 is not convincing. And what is "a cylindrical foot" (page 187), and why not give Absolute as well as C., F., and R. scale conversions?

But these are minor points amidst the general run of excellence.

The Cleethorpes Urban District Council have placed a contract with the Walker-Weston Co., Ltd., for the supply of their patent interlocked double-layer reinforcement, in connection with the reconstruction of the main Grimsby Road at Cleethorpes.

The design of the reinforcement by the Walker-Weston Co. was the only one which met the scientific requirements providing against tension at top and bottom of the slab with provision for diagonal shear stresses and special provision at cantilever point of roadway.

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"Palmam Qui Meruit Ferat."

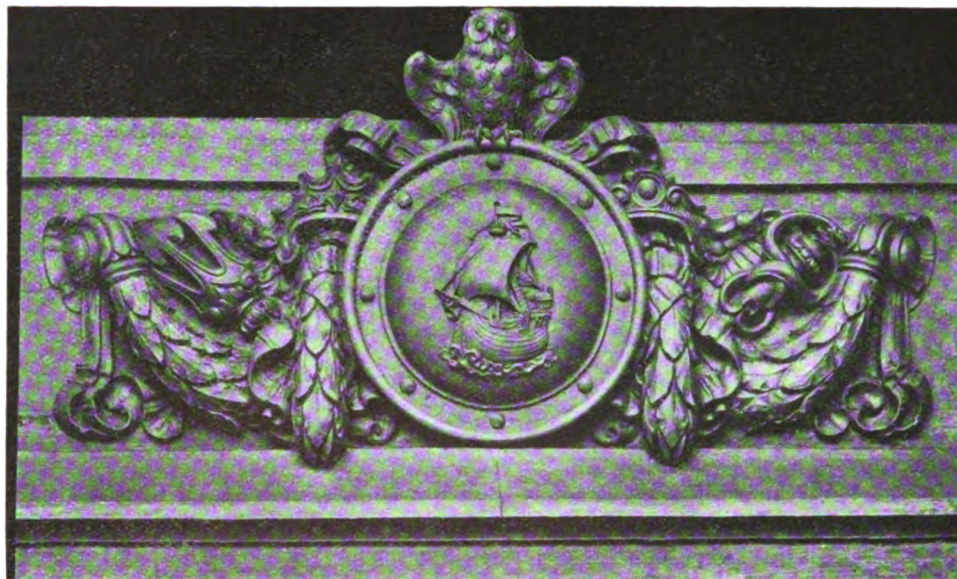
The Duchess of Rutland's recent letter to "The Times" on the want of publicity accorded to the sculptors responsible for our public monuments opens up an interesting question. No one will deny that the Press of to-day deals with far wider subjects than its meagre predecessor of the eighteenth century, but on this one point there seems to be a curious retrogression. The little quarto newspapers of two centuries ago betray an alert interest in sculptors and in sculpture which is altogether foreign to their successors, and it may be worth while to give a few instances of this interest and to suggest some reasons for its disappearance to-day.

We are not concerned with mere obituary notices, since, as Jane Austen remarked a century ago, "human nature is so well disposed towards those who are in interesting situations that a [sculptor] who either marries or dies is sure of being kindly spoken of," and an obituary notice in "The Times" is apt to be as long and laudatory as that of Mr. Francis Bird, sculptor, in 1781, part of which was quoted in our number for October 21, 1921. It is the eager interest in the work of living men that we now miss. The modern newspaper no longer inserts notices that a noble statue of Hercules, executed by the ingenious Mr. Such-a-one, has been sent down to Sir Blank Blank's country seat, who has built a magnificent temple to receive it (cf. the "Public Advertiser" for January 12, 1757); nor that a very fine marble statue, done by so-and-so, has been presented to the University by the subject's illustrious daughters the Ladies Asterisk (*ibid.*, July 20, 1756); or that the equestrian statue of a late monarch, designed for Bristol, was begun on such a day, cast in plaster of Paris and set up in his studio three months later, and is much approved on, and by the critics skilful in the art thought to be the best statue ever made in England ("Free Briton," August, 1733—two years, that is, before the work was finished); nor do the poets burst into song over a proposed design for a public building or a monument as T. W. did in 1740 over Prior's monument in Westminster Abbey, or an anonymous writer in the "Daily Post" in March, 1744, when the sculpture of the Mansion House pediment was under discussion. These passages—and they might be multiplied indefinitely—indicate a public interest in sculpture which is curiously lacking to-day. When a bust of Shakespeare, in memory of his printers, Heming and Condall, was erected outside St. Mary Aldermanbury, thirty years ago, the fact was noted in the papers, and a certain number of people went to look at it; when Scheemaker's statue of Shakespeare was erected in 1744 it was "spoke of in all conversations and in publick print." "Crowds of spectators," says the same writer, "daily resort to see it," so that "at length, by this taking object—Shakespear, the public favourite of all English playwrights, tossed his sculptor above

on the summit of the wheel and . . . brought him into considerable employments of profits and honour."

Whence came the change? First of all, doubtless, through sheer boredom with the subject. Right through the eighteenth and the first quarter of the nineteenth century monuments of public interest were constantly being erected, and the public was called upon to admire until admiration became a weariness of the flesh. Secondly, the monuments themselves steadily declined in interest—after 1780 at any rate; the age of allegory was passing, but the sculptors clung to an outworn convention until they brought their own art into disrepute. Finally, the Oxford Movement and the Gothic Revival worked hand in hand to bring public taste into another channel—that of church decoration. Firms for the supply of ecclesiastical art arose, and the artist's name was lost in that of Messrs. So-and-so. The most important sculptural features, whether of new churches or restored ones, screens and reredoses, were designed by the architect, the craftsman who carried out those designs being left in obscurity. Where the "Daily Advertiser" of 1781 gave the designer and the sculptor equal consequence when, as in the case of Kneller's monument, they were not the same, the paper of the 1880's merely announced that such and such a screen had been filled with figures after the designs of Sir Gilbert Scott. *Hinc illæ lacrimæ.*

What is the remedy? First and foremost, good sculpture, signed in a prominent position. Secondly—and for two or three years the demand for war memorials seemed likely to satisfy this condition—a genuine public interest in works of art other than oil paintings, the sole artistic refuge of the intellectually destitute. Thirdly, the intelligent co-operation of the Press and of the makers of local guide books. If the library committees of our smaller towns were to compile a list of works of art in the neighbourhood and either have it printed or keep it for reference at the library itself; if the museum and fine arts committees of our great cities did the same upon a more elaborate scale, the information would filter into guide books, and so eventually into the minds of townsfolk and of visitors alike. It may seem incredible, but is most literally true, that two visits to a South Coast town and many inquiries failed to disclose the sculptor of a very noble statue of Harvey, the discoverer of the circulation of the blood; and if this is the chance experience of the writer, it must be the case with many more. We may welcome the publicity recently given to the sculptor of the statue of President Lincoln, but let us be consistent enough to insist on the same publicity for the names of our own sculptors, and thereby regain something of the public interest in that great art which characterised a century termed by superior people philistine.



PORT OF LONDON BUILDING. EXTERIOR CARVING.

Our Illustrations.

PORT OF LONDON AUTHORITY BUILDING, TOWER HILL.
EDWIN COOPER, F.R.I.B.A.,
Architect.

DETAIL OF BOARD ROOM.

COMMITTEE ROOMS.

MEMBERS' WRITING ROOM.

MEMBERS' DINING ROOM.

Notes and Comments.

Acoustics and Architects.

Architects are unable to predict with certainty the acoustic properties of the halls and chambers they design, though they now know enough to avoid certain proportions of rooms and certain materials. The problem is engaging attention in the United States, where the late Professor Sabine, of Harvard, had already made progress in exploration of the acoustic properties of architectural interiors. A scheme is on foot to establish an American Institute for Acoustic Research. Professor C. A. Rummick, of Wellesley College, Massachusetts, to whom the proposal is due, calls attention to the progress which has followed combined intensive research in the photographic and lighting industries, and thinks that the time has come when equal advantages might be gained for acoustics. Already there exist more than a dozen American laboratories where investigations into different branches of the subject are in progress. We have no doubt that American investigation on the proposed lines will be as completely successful as it was in the investigation and elimination of the causes of yellow fever in tropical America.

R.I.B.A. War Memorial.

The Rt. Hon. the Earl of Crawford and Balcarres, who is an Honorary Fellow of the Royal Institute of British Architects, has consented to unveil a War Memorial Tablet in the Galleries of the Royal Institute. The ceremony will take place on Monday, November 20, at 3 p.m. Members and their friends are cordially invited to be present.

In the course of the war more than 1,300 Members and students of the R.I.B.A. served in various branches of His Majesty's Forces, and more than 230 of the number laid down their lives. The names of the dead will be inscribed upon the tablet, which was designed by Mr. Trenwith Wills, A.R.I.B.A., whose design was successful in a competition restricted to Members of the R.I.B.A. who had served in the war.

Edinburgh Housing Conditions.

At a meeting of the Presbytery at Edinburgh the housing conditions of the city were discussed, one speaker stating that there was a district in St. Leonard's where the population was 600 to the acre, whereas in the suburbs it was 1.4 to the acre. It was entirely beside the point to say that the remedy should be provided by the private speculator, because he built for profit and his interests were not those of the poor. Though we are willing to admit that the clearance of slums as a proposition stands by itself, because it may be necessary and expedient for

municipalities to do it in the interests of public health, even if it is not remunerative, we think the general argument is based on false premises. Almost every operation of our lives, if analysed, shows that all of us work for a profit. Nothing would ever be undertaken in trade and industry if it were not that it could be carried out at some profit. Nor do we think it fair to quote the amount spent in drink to prove that if people were deprived of facilities for spending in one direction they would spend in another and a better one. What should be done is to stimulate the ambitions of people and encourage them to do more and better things by their own efforts. None of the speakers seem to have alluded to one of the factors which has accentuated bad housing conditions in Edinburgh and other Scottish cities. We refer to the fact that the old buildings are so solidly and strongly built that many of them are intact to this day, whereas in England they have fallen into decay and been replaced by accommodation of a better character, so that out of what is evil in itself has come good. Housing is a difficult problem and probably insoluble unless it is looked at from the broadest of possible positions, which is this, that a nation is economically in an unsound condition if a large proportion of its citizens cannot support themselves and make reasonable provision for their requirements by their own exertions. If this is not the case State housing is but quack remedy for a disease which can only be met by emigration.

"Nauseous and Wicked."

The Blackpool Council are giving themselves a free advertisement by the objections they have raised to the purchase of Sir John Collier's picture of Clytemnestra for the local art gallery. Sir John is now regarded in London as among the most conservative of his calling and an eminently "safe man." The picture may be regarded as nauseous and wicked by the Blackpool councillors either because Clytemnestra is shown naked to the waist, or because she holds a sword in her hand, or again because her hair is down. None of these facts would now be considered as unfitting it for exhibition here, but standards of taste probably become stricter as we travel north, and possibly in the Shetlands what Blackpool would not object to would be regarded as being indecent. We are reminded of the delicacy and good taste of the old ladies who put frills round piano legs because they considered that being a leg it should be decently covered. Such conventions are no doubt good for trade, and if more usually adopted would open up new markets for our manufacturers. All of us will now know that if anything Blackpool is "almost too refined" and should be an ideal summer resort for those who are too modest for words.

London Art Galleries.

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The Royal Society of Painters in Water Colours opened its winter exhibition (the 179th of this Society, which was founded in 1804) at their own Galleries in Pall Mall East on Saturday, October 21, to close on December 16. The exhibitions of this old Society represent very generally the high-water mark of our water-colour art in technical achievement; and the present exhibition fully keeps the standard which British art in this important branch has possessed from the first, and still holds in a very remarkable degree.

This statement will, I consider, be fully borne out by the works shown this month: it is, in fact, a difficult exhibition to criticise, because the average of the 248 paintings on the walls is so good. We commence with Cecil Hunt's study of "Campiglio" and Nelson Dawson's clever "End of the Gale," and near these I found that Miss Macallam Swan's "Canal" has strong handling. A group of three attractive studies are Harry Watson's "Sketch in a Wood," A. Reginald Smith's "The Sandbank," and "The Giudecca, Venice," by Moffat Lindler. The charm of cool opalescent colour in this last seems to visualise Addington Symonds' description of "Venice asleep like a miracle of opal or of pearl upon the bosom of an undulating lake"; and is differentiated in the no less attractive scene also of fishing boats, but here in "Evening, Dordrecht," with a stronger note of colour, by the same artist. "A Path through the Woods at Sunset," by the President, Mr. Hughes Stanton, R.A., is not assertive, but thoroughly sound in its handling; and we come then to two figure subjects in Harry Watson's "Girl in the Open" and Russell Flint's brilliant figure study called "The Chinese Fish." Mr. Watson is to be admired in his broad treatment of the face in half shadow, and the dress, and Russell Flint in the brilliant colour scheme—the contrast of a vivid emerald green and telling black with the delicate flesh tints of the recumbent figure. For skill of handling the same artist's "Salle-à-manger Bretonne" is one of his best here, while "Jacqueline's Pool" is one of those delightful bathing scenes in which he excels.

The place of honour on the same wall is held by Frank Brangwyn's "Notre Dame," lent by Cecil Hunt, A.R.W.S. Mr. Brangwyn shows in the foreground some cranes beside a half-demolished house, drawn in his masterly way, with behind the grey-white towers of Notre Dame soaring up into the heavens. This is Mr. Brangwyn's only contribution; but on the next wall George Clausen, R.A., has six delightful water-colours, among which I would note especially "The Elm Trees" and "The Shower." These studies are full of life, of atmosphere; we feel the wind stirring these great trees and driving the clouds across the sky. In the centre of these Clausen paintings Mr. Anning Bell, R.A., shows a scene of the youth of Mary Virgin, and a study of Venice which is better, in my judgment, than Matthew Hale's rather dull rendering of the same magic city of the Adriatic on the same wall. Mr. A. J. Munnings is, like Mr. Frank Brangwyn, a comparatively recent and an important member of this Society, and he sends this year three paintings, all having as their theme that noble animal the horse, a fine specimen of which is the thoroughbred stallion "Radium." An astonishingly fine painting is "The Way to Arundel and Chichester," by William T. Wood, and D. Murray Smith is at his best in the monumental dignity of his elm trees "At Bintree, Norfolk," and in "The Trout Pool on the Wensome, Norfolk." I have already mentioned Mr. Cecil Hunt, but in this exhibition, where he comes out very strongly, he has also two admirable studies of the "Cliffs of the Tarn, near Albi," and "Cadini Dolomites, Misurina," while "Clearing in the Wood," by the President, is to be noted. Lastly, I will mention work by R. Thorne-Waite, Robert Little, Arthur Rackham, James Paterson, R.S.A., and three delightful studies on the last wall—"Pen-y-Ghent," by Reginald Smith, "Scotch Herring-boats," by Nelson Dawson, and "The Gesuati Church at Venice," by Moffat Lindler—to conclude my notice of an exhibition where the average of work is exceptionally good.

Mr. Gordon Coutts, whose work I have already mentioned in these columns, is giving another exhibition at the Gieves Gallery* of his work during the last winter in Morocco, which was opened by Sir Basil Scott on October 17. I am pleased to hear that this artist's "Merchant of Tangier"—which was shown in his last London exhibition, and which I then noticed specially—has since been acquired by the Corporation of Rochdale for their permanent collection. Besides some portraits, which include a charming study of a lady "In the Garden," who, I believe, is the wife of the artist, most of the paintings shown deal with life in Tangier; and among them I noted "The Story-Teller" and "The Snake-Charmer" as true to Moorish life—the former just such a figure as I have seen with an enthralled audience in the Soko, where probably "The Potter," as here shown, was also seated. "The Brigand" is quite a good-looking young Moor with tawny beard; but the gentleman in a large sun-hat "From the Desert" is one I should not desire to come across outside the walls of Tangier on a dark night. One of the most charming effects is "The Blue Mediterranean": the work is good, but repeats the same note as that of last year.

An exhibition of etchings by J. M. W. Turner, R.A., at the Cotswold Gallery is of special interest, as being the first, I believe, devoted exclusively to the artist's etched work. "The object"—says Mr. Finberg, after referring to the plates of the "Liber Studiorum"—"of the present exhibition is to invite attention to Turner's etchings simply as etchings, without reference to their function as supports for the mezzotint engravings. . . . Plates like the 'Crypt of Kirkstall Abbey,' 'The Clyde,' 'Winchelsea,' 'Watermill,' and 'Isis' are marvels of summary and expressive line-work. There is no clever playing with needle and copper as in so much modern work. It is a slowly laid and thoughtful line, in marked contrast with the impetuous speed of his later water-colours, but the powers of evocation of his deliberate line are not less wonderful than those of his swiftest drawings."

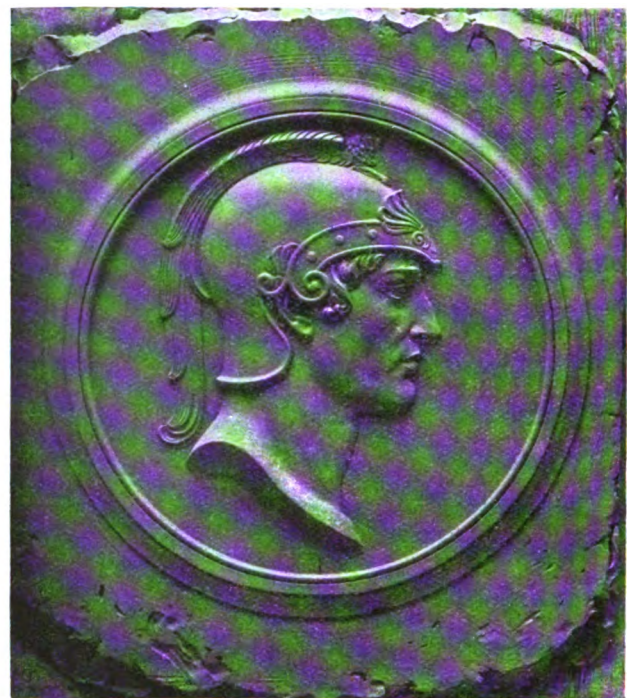
I mentioned on October 20 the "Virgin and Child" by Jan van Eyck, now being shown in Room XV. of our National Gallery before it goes to Australia. This is a gem of the great Flemish master's art, and Melbourne is fortunate to have secured it. The Madonna is seated under a canopy, and holds on her knee the fair-haired baby Christ, who is turning over the pages of an illuminated book. Very noticeable is the beautiful canopy itself, with fine gold work brodered on the green damask, and the finished painting of the vessels of glass or copper beside the figures. It is a restful painting, full of quietness, of tender feeling, and hangs now between two attractive works by Campin. I gather that it was acquired in the eighteenth century by Blundell of Ince, who was one of the great collectors of that age of connoisseurs. Thomas Jenkins was then the dealer at Rome who supplied the passion for objects of antique art, and employed Nollekens and Italian craftsmen to supply statues with missing heads and limbs: a beautiful volume of prints has just come into my hands which is dedicated by Piranesi to "Signore Tommaso Jenkins, Pittore ed Accademico." Blundell had a fine collection, which he located in a "garden pantheon" at Ince Blundell Hall: in this little van Eyck he had secured a masterpiece.

The contents of the Grafton Galleries were sold last week, fetching altogether £700. The gallery, though never reaching the great tradition of the old Grosvenor Gallery or the beauty of design of the New Gallery (now, alas! a cinema), has several important exhibitions to its credit, notably those of "Fair Women" (1894), the Old Masters of 1909 and 1911, and the Spanish artists of 1913-14. The site is valuable for building purposes; but it will be a matter for regret if its occupation as an art gallery is to end with the sale of last week. S. B.

The Hucknall Urban District Council have considered and accepted tenders for the work in connection with the extension of the waterworks. The successful tenderers are Messrs. Hodsons, Ltd., 58 Castle Gate, Nottingham, who quoted the sum of £3,476. The plans have been prepared by Messrs. W. H. Radford & Son, civil engineers, Nottingham.



PORT OF LONDON BUILDING, BOARD ROOM CEILING.



PORT OF LONDON BUILDING, BOARD ROOM CEILING.

The Royal Institute of British Architects.

Notes from the Minutes of the Council Meeting,
October 16, 1922.

The Code of Professional Conduct and Practice.—The Code of Professional Conduct and Practice adopted in 1920 and published in the Kalendar was rescinded and ordered to be deleted from the Kalendar.

The Final and Special Examinations.—The Ashpitel Prize for 1922 and the Mark of Distinction for Thesis were awarded to Mr. A. S. Reid.

The Board of Architectural Education Medal.—The medal for the best set of drawings submitted at the Annual Exhibition by Post-Graduate students exempted from the Final Examination was awarded to Mr. P. B. Haswell, B.Arch., Liverpool University, and Miss E. G. Cooke, of the Architectural Association School, was highly commended.

Candidates for Membership.—The applications of 13 candidates for the Fellowship and 144 candidates for the Associateship were approved.

Registration of Architects.—It was decided to take immediate steps to lodge the requisite Parliamentary notice in November next of the intention of the R.I.B.A. to bring forward an Architect's Registration Bill.

It was further decided to convene a General Meeting of the Royal Institute at an early date to obtain the approval of the General Body to the draft Registration Bill prepared by the Registration Committee.

The Exhibition of Architecture.—The Exhibition of Architecture which was to have been opened on November 1 was postponed until a later date.

The R.I.B.A. Examinations and Young Architects.—It was decided to approach the Allied Societies and request them to make schedules of architects practising in their districts and to endeavour to obtain from them full particulars of the pupils in their offices so as to enable the R.I.B.A. to approach them directly and bring to their notice the importance of preparing for and passing the R.I.B.A. examinations.

The International Labour Office, Geneva.—It was decided to approach the Foreign Office and request that steps should be taken to persuade the promoters of the International Labour Office Competition to open it to the architects of all nations who are members of the League of Nations.

Birmingham University Town Planning Lectures.

Mr. William Hayward, F.R.I.B.A., delivered one of the Lectures of his Town Planning Series at Birmingham University, in which he discussed the Town Planning of Ancient Rome.

The earliest records of Rome suggest that the city was not founded as the conscious act of a powerful people, but precariously, by primitive tribes, whose chief need was satisfied by the security of an easily defended camping ground, and whose housing was probably of a quite temporary character. There is

therefore an absence of that military precision of plan which the capital city gave to her colonial settlements when she had developed a matured policy and a strong tradition.

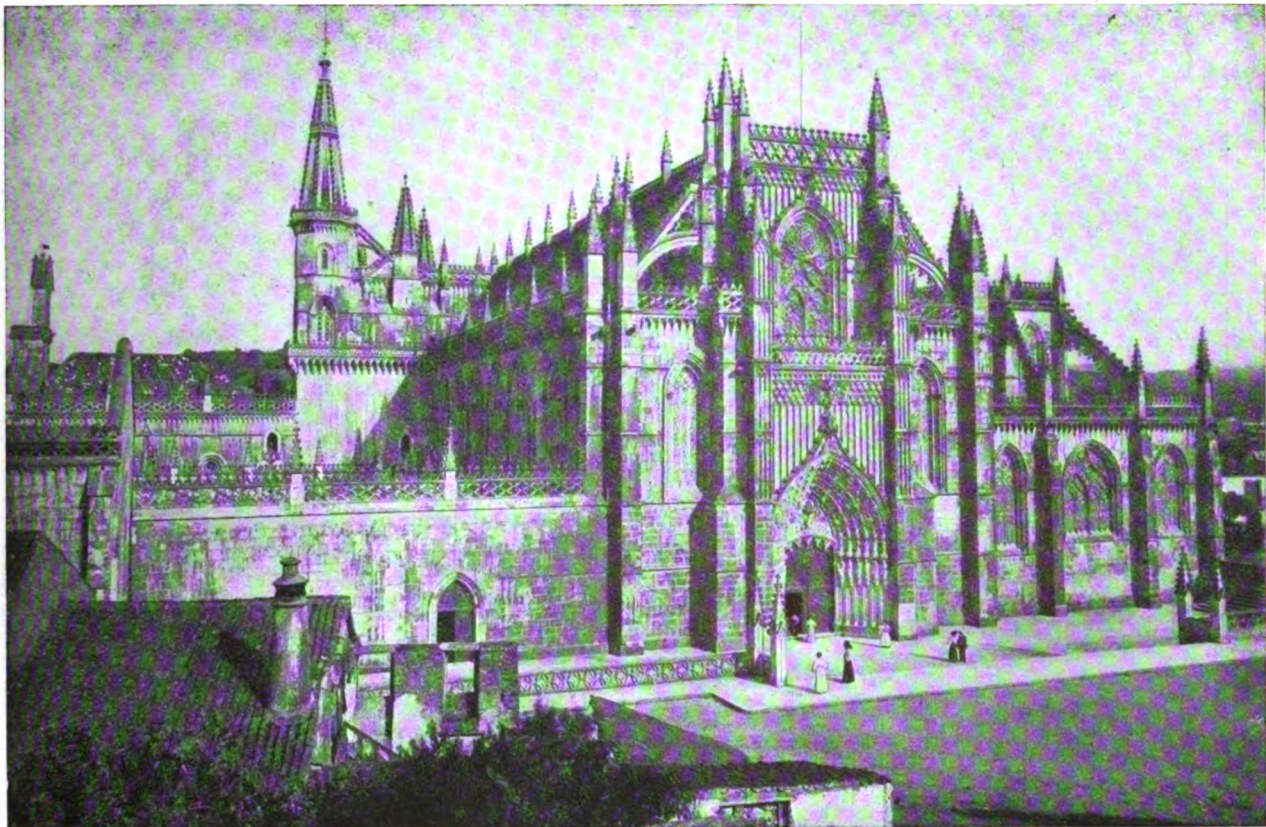
The Romans of the Republic placed the beginnings of their city at 750 B.C., but recent discovery suggests a much earlier origin. A few months ago excavations on Monte Mario (about one mile N.W. of the Vatican hill) exposed neolithic implements, prehistoric pottery, and Etruscan graves, which may take us back to 1000 B.C. or earlier. But, whatever the date of origin, Rome, like many a modern city, grew without a plan, and, like them, she found herself badly handicapped by vested interests before she realised the consequences of her neglect.

During the Empire Rome struggled vigorously with her improvement problems, and the wonderful series of Fora, whose first appeal to us is one of architectural grandeur, has for practical purpose not only an important opening up of the congested heart of the city for public convenience, but, by cutting well into the narrow pass between the Capitoline and the Quirinal hills, to effect a much-needed communication between the old centre and the Campus Martius.

With the transfer of the Imperial residence to Byzantium in A.D. 330 development ceased. The conflict between Paganism and Christianity was not favourable to town development. The sacking of the city in A.D. 410, the earthquake of A.D. 442, and the destruction of the Aqueducts assisted in the depopulation of the city. The extension of the town on the hills above the Campus Martius had depended largely upon a highly artificial method of water supply, and as the Aqueducts ceased to be available the population, once upwards of 2,000,000, dwindled to a few thousands, abandoned the higher levels, and gathered in the Campus Martius, on the banks of the Tiber, whose waters, although much polluted, were freely drunk as practically the only water supply available.

Mr. Arthur Harrison, F.R.I.B.A., of The Croft, Yardley Wood Road, Moseley, Birmingham, a member of Messrs. Harrison and Cox, Colmore Row, Birmingham, architects, and a former president of the Birmingham Architectural Association, who died on August 22, has left £31,441, with net personalty £17,818. He gives any one of his drawings or paintings by J. W. Wainwright to the Birmingham Corporation, for the Art Gallery.

The Commercial Secretary at Cologne has forwarded to the Department of Overseas Trade extracts from the German Press of recent dates dealing with increases in the prices of various products. According to the "Kölnische Zeitung" of October 14, cement prices will again be increased, with effect as from October 16, for Rhineland and Westphalia by Mks. 25,242 to Mks. 101,724; for North Germany by Mks. 27,242 to Mks. 105,724; for South Germany by Mks. 27,242 to Mks. 107,724 per 10 tons. The price increases have become necessary owing to the increase of wages and the higher railway freight. The prices are quoted exclusive of packing and for delivery from warehouse.



WEST FRONT, BATALHA.

Notes from Portugal.

By G. A. T. MIDDLETON.

No. IV.—Batalha.

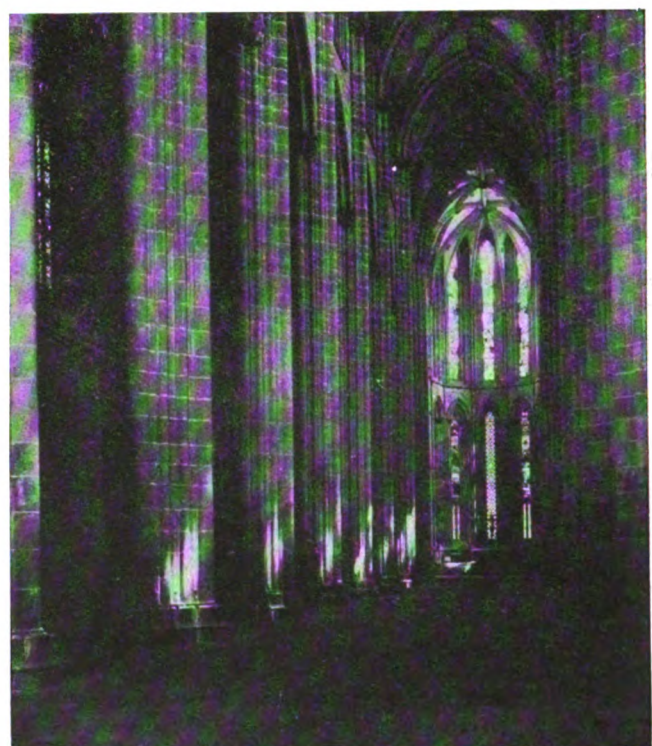
In the year 1385 a battle was fought at Aijubarrota, in which a handful of Portuguese defeated a formidable Spanish army under D. Juan I. of Castille. In commemoration of his success, the victor, John I. of Portugal, founded a great monastery. It was commenced in the following year and bears the name of Batalha: it is the "Battle Abbey" of Portugal, the greatest Gothic edifice that the country possesses, and in certain significances the greatest in the world. It is also wonderfully complete and preserved.

Its date alone marks it as exceptional, for the hundred years war between England and France was in progress, while neither country (nor the rest of Northern Europe for that matter) had recovered from the devastation of the Black Death of 1349, and ecclesiastical building was at a temporary standstill. Amongst buildings of the first rank it is contemporary with Milan Cathedral alone, and is worthy to rank alongside it.

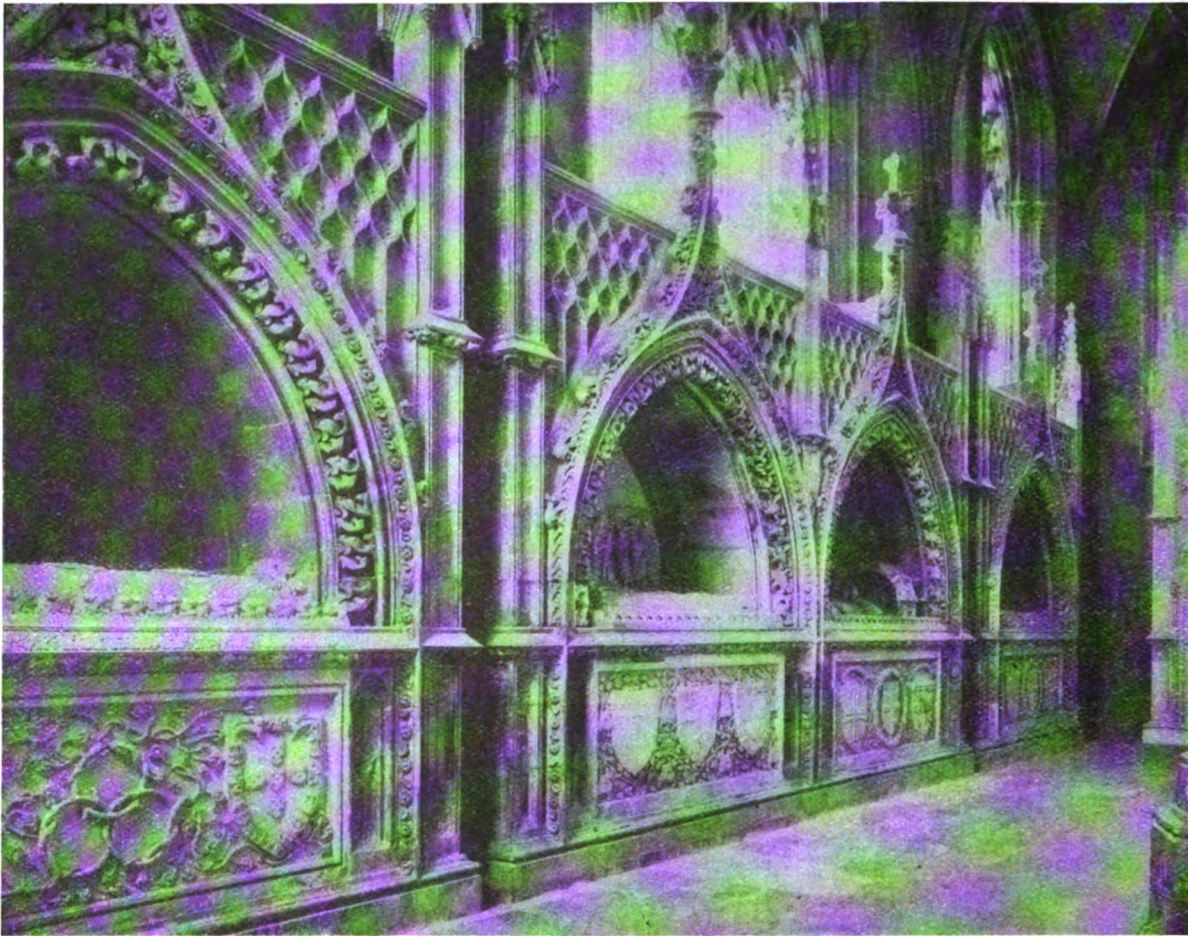
Externally the church suffers perhaps for want of a great central feature, the only tower being small, at the extremity of the north transept, to provide staircase access to the roof. It will be noticed that it has a pierced spire of delicate tracery between richly crocketed ribs, broken rather more than half way up by a traceried ring, repeating the motive of the parapet at its base, which serves to mark the termination of the open tracery and gives a certain appearance of strength.

Flat roofs, both to nave and aisles, of stone slabs resting directly upon the vaulting, produce an outline which is unusual to northern eyes, combined with a sense of repose, such as seems to have been sought in other places (such as Peterborough) by masking the high pitched roofs. One result of this is that the flying buttresses are unusually well displayed. They are cusped, traceried and crocketed, yet the thrust resisting and constructional elements are well marked, and the pinnacles, English rather than French in form, are sufficient without being overdone, either in weight or elaboration. The parapets are all of pierced tracery of simple pattern, and the crenellation is cusped.

The treatment of the west front is masterly, with its concentration of ornament upon the central portion, while the main doorway is of great beauty without being cavernous in its effect, the cusping below the tympanum, enhanced by contrast with the dark doors, being peculiarly beautiful. The west window, however, is open to criticism, for, to an Englishman at least, the tracery seems overdone. It is of the flowing "decorated" type which it is customary to associate with England, with all the English strength of its



INTERIOR LOOKING EAST, BATALHA.



FOUNDER'S CHAPEL, BATALHA.

constructional outlines, yet carried farther than any English example and reaching out towards the French "flamboyant." The repetition of its principal motive in the two main lights below, on a smaller scale, will be noticed with interest.

Internally the nave has all the sublime dignity of a great Gothic cathedral, helped greatly by the unusual comparative height of the aisles, rendered possible by their flat roofs, and the consequent omission of the usual triforium gallery. The lancet effect of the widows of the apse is also unusual and

beautiful; while it so happens that the lighting, at the time when the photograph was taken, reveals the detail of the pier bases, with their delicate yet sufficient chamfer stops.

On the south side of the church, near the west end, there is a large chapel which contains the tombs of the founder and several of his children and his companions in arms. Its gates are of a later date, apparently the 17th century, of a slender balluster design in a strong rectangular setting relieved by small plates of pierced brass—a treatment which contains a good deal of suggestion. But the chapel itself, and the recesses for the tombs, belong to the 14th century, richly carved and instinct with the spirit of that date everywhere. The foliage is contrastedly strong and delicate, yet it is all that of full summer, and flowers, such as the rose, are freely introduced. In some cases, however, the altar tombs themselves are of a later date, and though an obvious effort has been made to secure general uniformity of treatment, yet in some cases, the change of fashion—if it may be so called—is plainly indicated by the introduction not only of the decaying autumn leaf but even of the bare gnarled boughs of winter.

The extreme beauty of the fourteenth century foliage carving is possibly even better exhibited in a small collection of the original vaulting bosses, preserved with other fragments—including a font of a much earlier period, about which nothing seems to be known.

There is also a small and simple cloister of the same date, with an upper storey of renaissance character and timber roofed, the whole resulting composition being of wonderful charm and admirable proportion.

Another cloister, however, of the Manoëlian period (about 1500–1520), is of such extraordinary complexity of design, and upon so vast a scale, as to completely overshadow the earlier work in popular estimation. In no place in the world is true tracery so completely replaced by interlacing and exaggerated foliage, autumnal, rampantly contorted—with any further epithets which one may care to apply; yet admirably executed, and in a setting of sufficiently simple vaulting, so that the general effect is hardly extravagant.



BOSSES AND FONT, BATALHA.



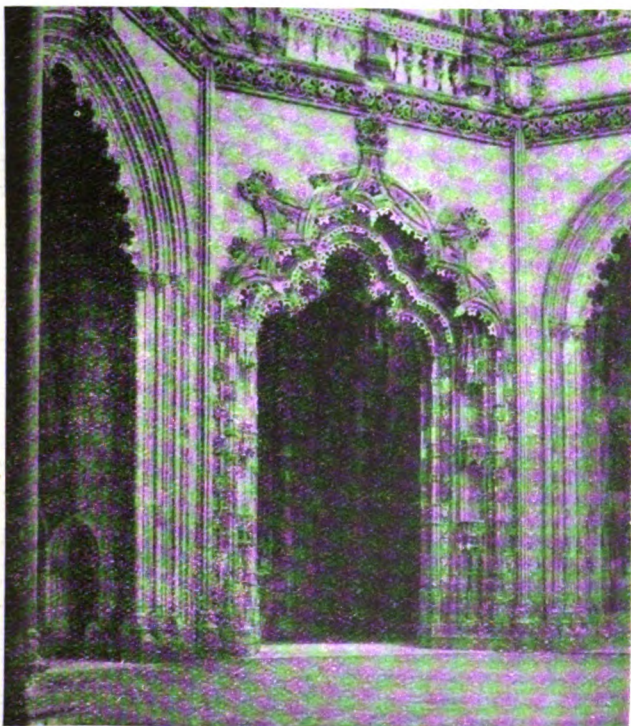
MANOËLIAN CLOISTERS, BATALHA.

It is just one of those things which must be seen, and studied with some care, to be appreciated fully.

In the centre of one of the walks of this cloister there is thrown out an open vaulted cover to a fountain, a feature by no means uncommon and of obvious value in a hot country, and this also exhibits the Manoëlian characteristics of almost undue richness of detail brought into harmony by simple surfaces and good proportion.

At the same time King Manoël was adding a chapel at the

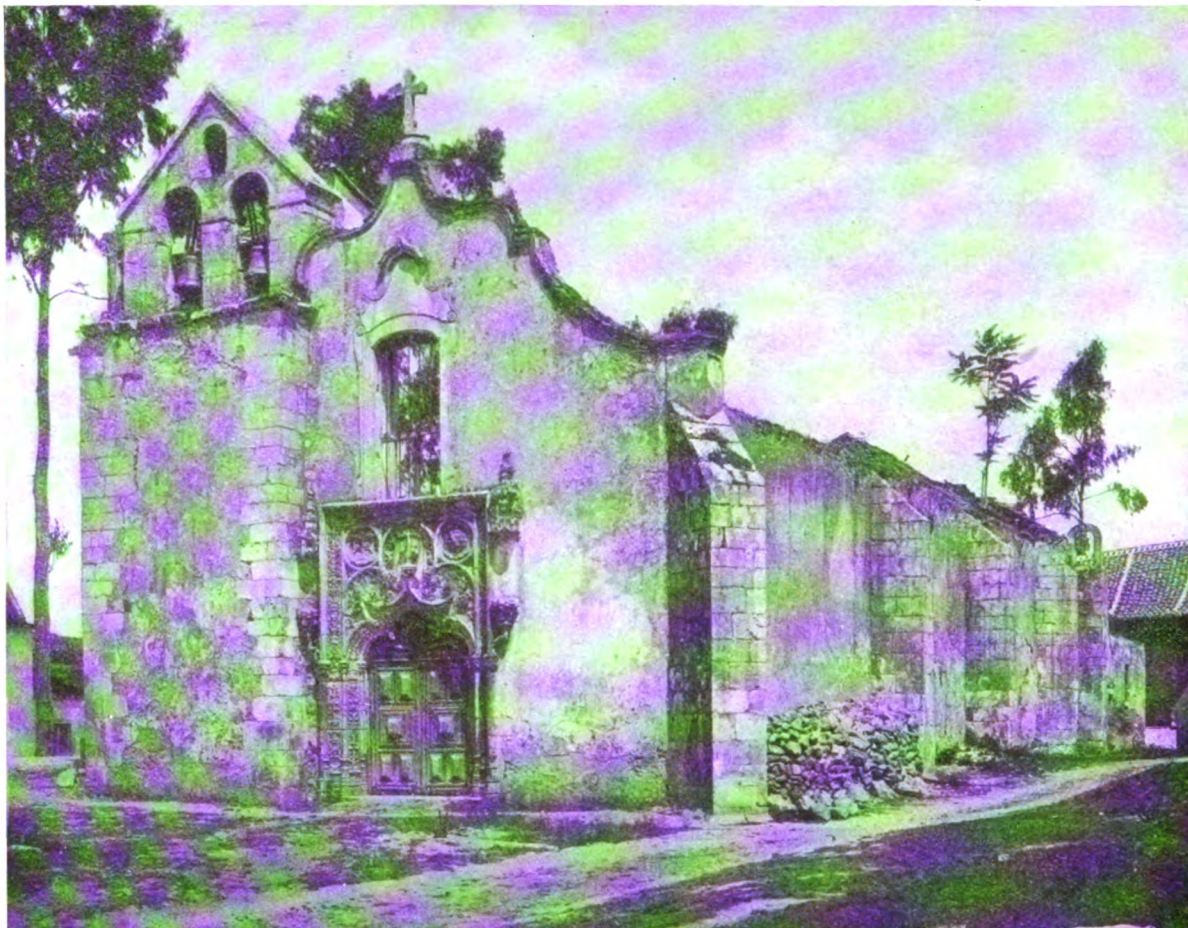
east end of the great church, in the same way that Henry VII, had shortly before added his chapel at Westminster; but Manoël did not live to complete his work, and it remains to this day unfinished, unroofed, and unconnected to the church. How rich it would have been—how rich, indeed, it is in its incomplete condition—can to some extent be appreciated from the photograph of its entrance, as seen from within the chapel. This is an extreme example of cusping, and enriched with the most perfect of foliage



MANOËLIAN DOORWAY, UNFINISHED CHAPEL, BATALHA.



GATE TO FOUNDER'S CHAPEL, BATALHA.



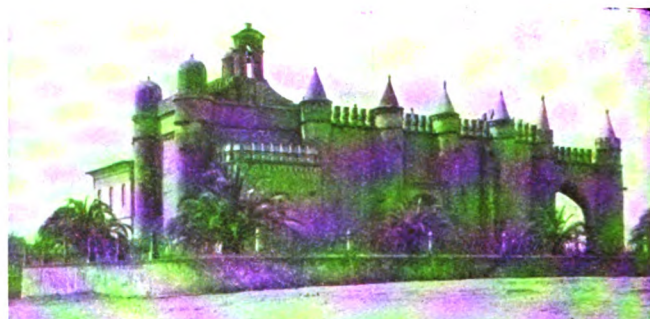
PAROQUINA D. MANOËL, BATALHA.

carving, as perfect as that in the chapter house of Southwell Minster but much more extensive. So wonderful is it that for a few moments one overlooks its unconstructional character, yet the relieving arch in the masonry points it out. But, after all, in face of the result, one wonders whether this may not be mere pedantic, carping criticism. How many of us could do as well?

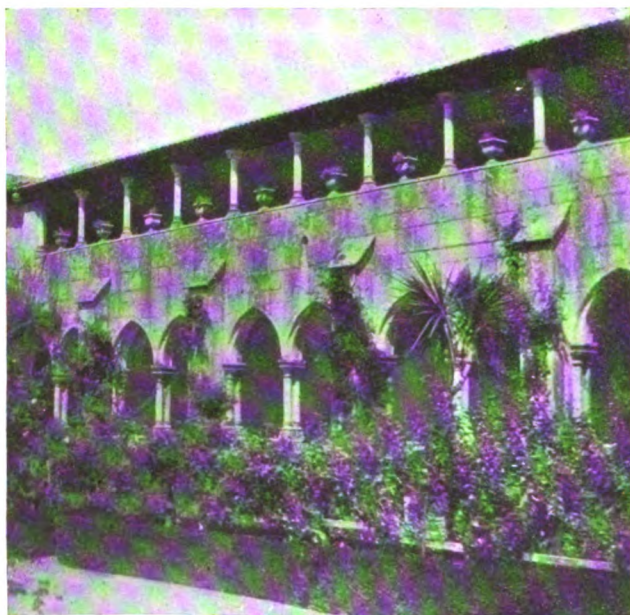
Besides the monastery there is not much at Batalha. No country town has grown up round it as at Battle—only a tiny hamlet, though King Manoël commenced a parish church close by which has a rich west doorway bearing indications in its detail of the French style of the period—the transitional to the renaissance, known as Françaist. Over the doorway, too, is a baroque window, enclosed in a

gable end which might almost be English Elizabethan; and there the story ends, for the church is now in ruin and has no roof.

NOTE.—Want of space prevented our giving the block below last week.



CHURCH OF S. BRAZ, EVORA.



14TH CENTURY CLOISTERS, BATALHA.

Forthcoming Events.

Friday, November 3.—Chadwick Public Lecture at Art Gallery, York. Sir Lawrence Weaver, K.B.E., F.S.A., will speak on "Land Settlement, Rural Housing and Rural Industries." 7.45 p.m.

Monday, November 6.—Royal Institute of British Architects. Meeting at 9 Conduit Street, W. President's Opening Address. 8.30 p.m.

Tuesday, November 7.—Institution of Civil Engineers. Meeting at Great George Street, Westminster, W. Opening Address by the President, Dr. W. H. Maw, and presentation of medals. 6 p.m.

Wednesday, November 8.—St. Paul's Ecclesiological Society. Meeting at 7 St Andrew's Street, Holborn, E.C. Paper by Mr. P. M. Johnstone, F.S.A., F.R.I.B.A., entitled "Romanesque Architecture in the South-Western Counties." 8 p.m.

Friday, November 10.—Town Planning Institute. Meeting at 92 Victoria Street, Westminster, S.W. Presidential Address by Mr. H. V. Lanchester, F.R.I.B.A.

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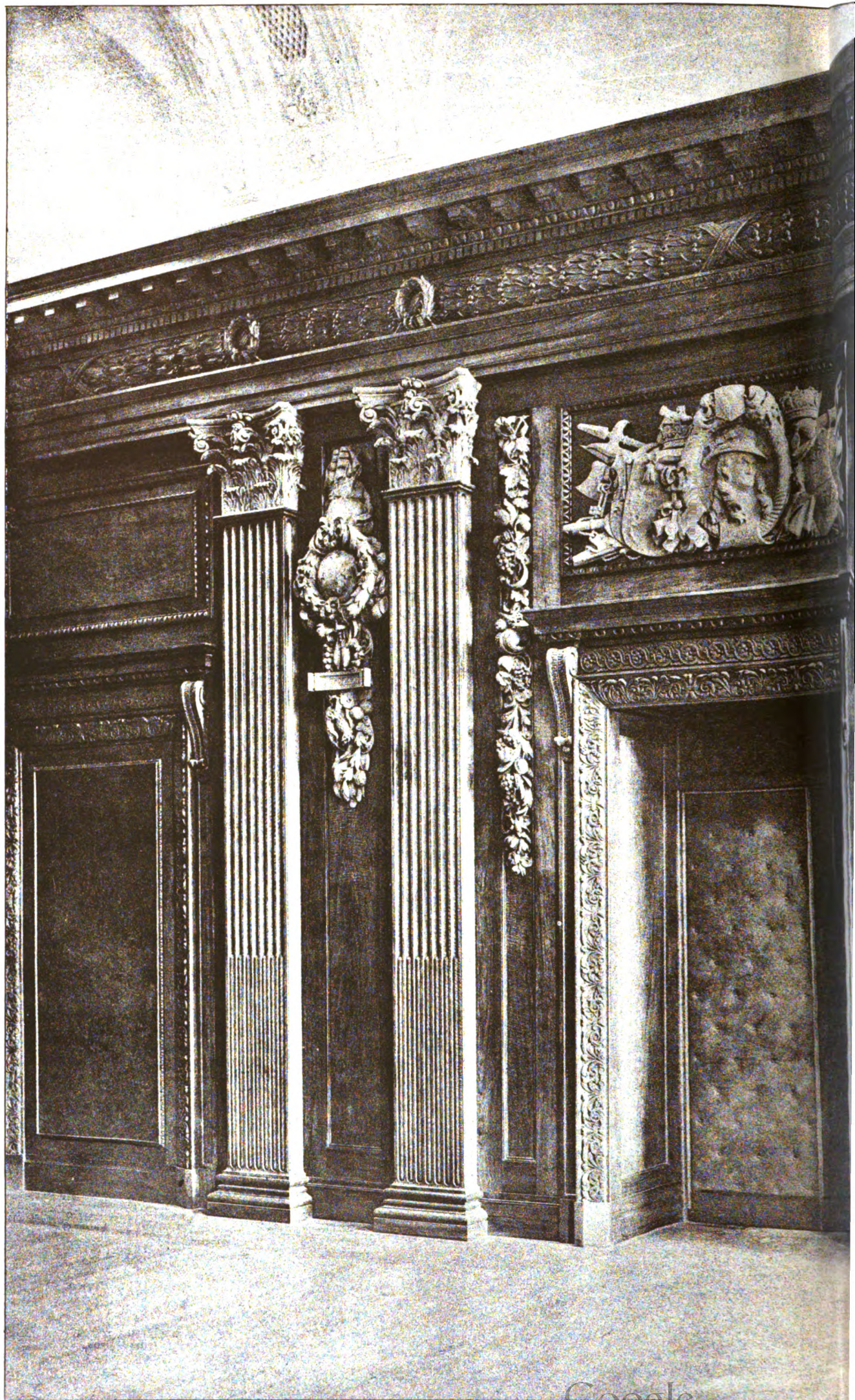
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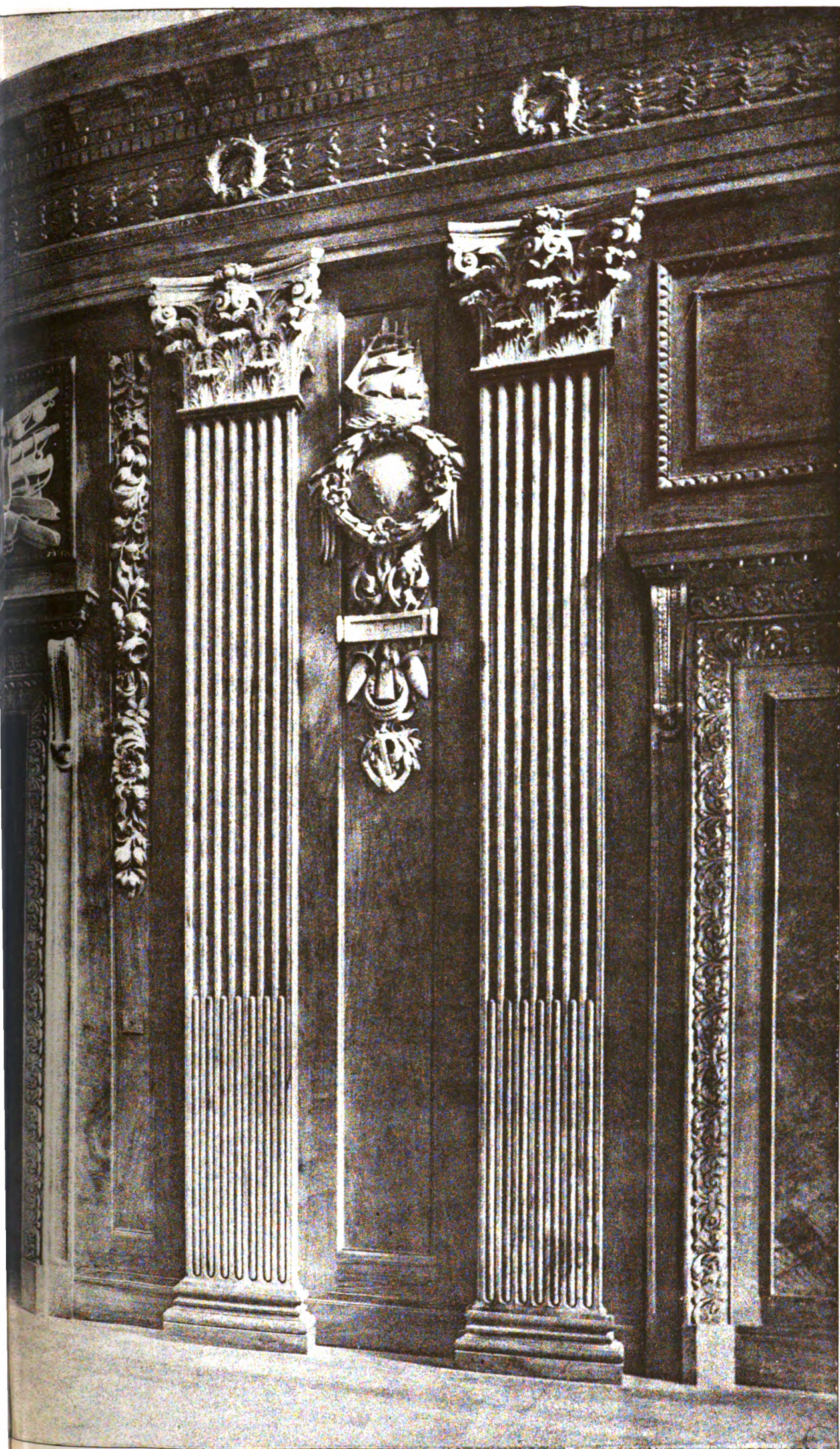
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THE ARCHITECT, NOVEMBER 3rd, 1922.



"INK-PHOTO" SPRAGUE-HAYCOCK (PRINTERS) LTD. 69 & 70, DEAN STREET, LONDON, W. 1.

COMMITTEE ROOM.

PORT OF LONDON AUTHORITY BUILDING, TOWER HILL, LONDON.

EDWIN COOPER, F.R.I.B.A., ARCHITECT.



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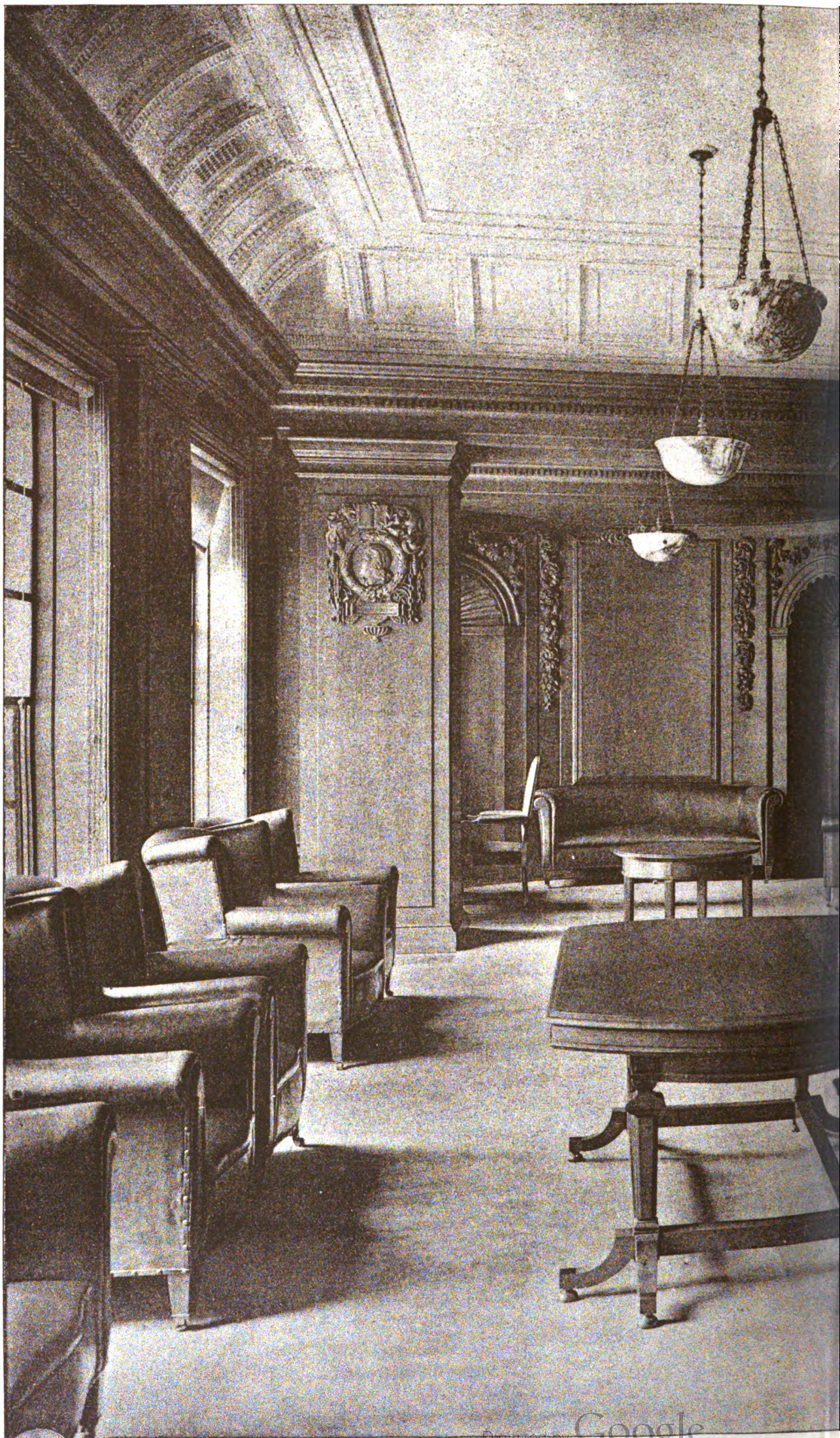


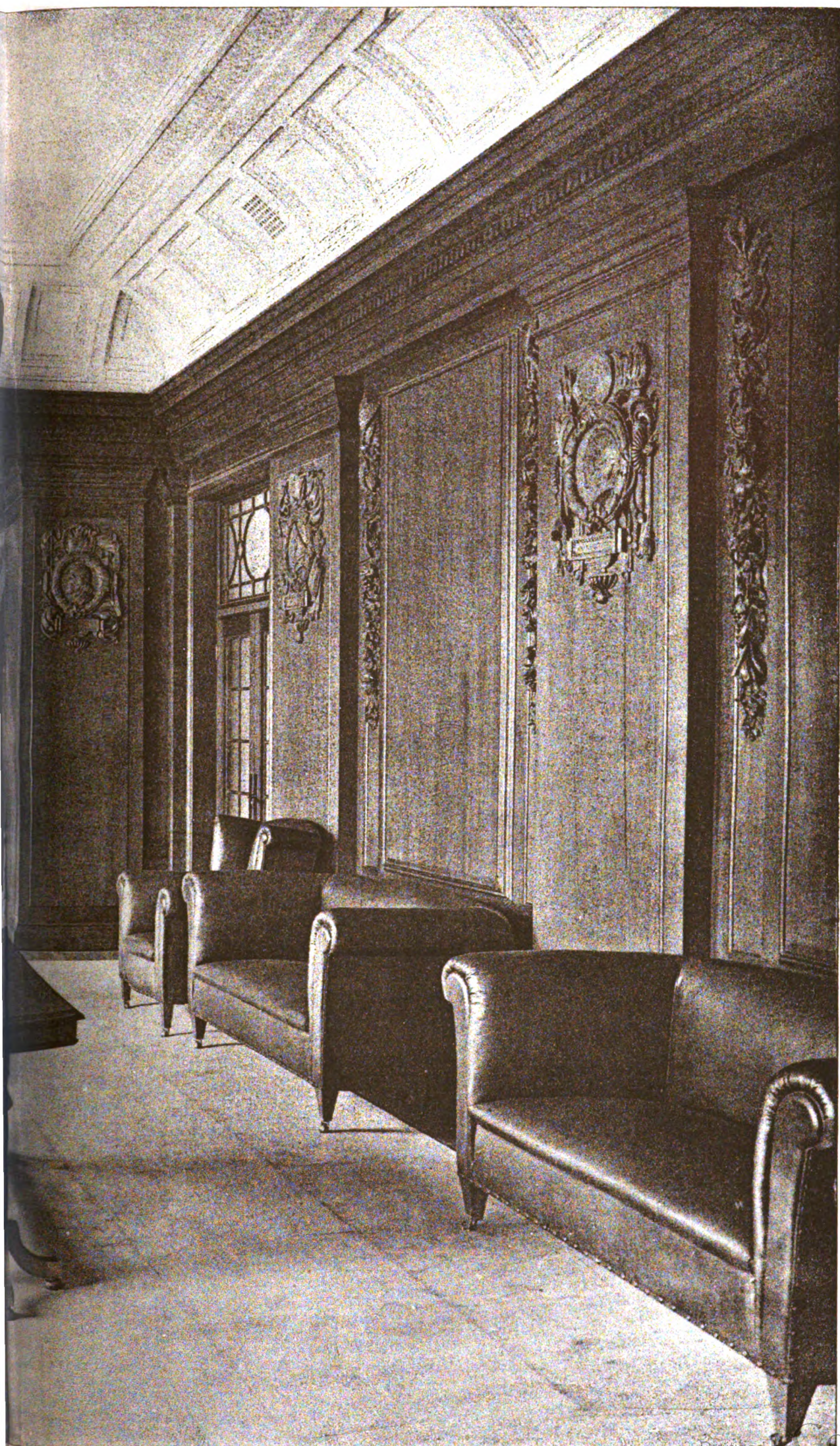
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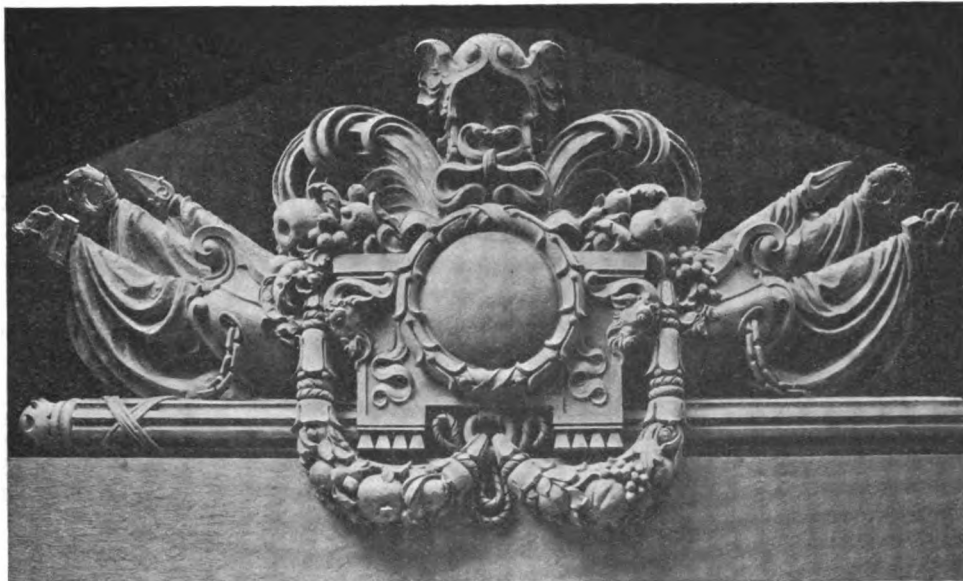
MEMBERS' DINING ROOM.

PORT OF LONDON AUTHORITY BUILDING, TOWER HILL, LONDON.

EDWIN COOPER, F.R.I.B.A., ARCHITECT.







PORT OF LONDON BUILDING. STAIRCASE.

The Ventilation and Atmosphere in Factories and Workshops.

Chadwick Public Lectures :

Professor Leonard Hill read a paper at the R.I.B.A. on the 26th ult., in which he said the body is fashioned by Nature for the getting of food by active exercise, and upon the taking of exercise depends the proper vigorous function of the digestive, respiratory and vascular organs. Consequent on this, too, is the vigour of the nervous system and keen enjoyment of life. So, too, the healthy state of joints, muscles, and ligaments and freedom from rheumatic pains depend upon proper exercise of the body—neither over-use nor under-use, either of which may be associated with malnutrition and lowered resistance to infection.

Deep breathing excited by exercise not only furthers the circulation and activity of the bowels, liver, etc., but secures the proper functioning of an adequate blood stream through all parts of the lungs.

Out of doors the skin is cooled and dried by the wind—the wind freely ventilating the clothes. The skin is also warmed by the radiant energy of the sun, and this actively causes evaporation. These to-and-fro changes of the skin's condition make for health. The monotonous life spent in an environment of over-warm, stagnant and moist air when people are confined in rooms, often crowded rooms, is contrary to the naturally changing conditions which occur out of doors.

Continuing, the lecturer emphasised the fact that it is not the relative humidity that matters, but the actual vapour pressure of the air coming in contact with the skin, and he gave the vapour pressure figures of saturated air at various temperatures, maintaining that the breathing of cool air entails much greater evaporation from the respiratory membrane and consequent greater outflow of lymph through and secretion of fluid from it. By such outflow the membrane is better washed and kept clean from infecting microbes. The open-air worker is thus better protected, and, moreover, escapes the massive infection from carriers which occurs in shut-up rooms.

Wet bulb temperatures in factories and mines are physiologically more important than dry bulb temperatures, and vapour pressure more important than relative humidity, but the velocity of the movement of the air is most important of all, for on this chiefly depends cooling by convection and evaporation.

To measure these cooling and evaporative powers, Dr. Leonard Hill has introduced the Kata-Thermometer, a large-bulbed spirit thermometer, by means of which the cooling power of an atmosphere as due to evaporation, radiation and convection may be determined. By keeping the cooling power in proper relation to the work done and the heat output of the worker, the latter can be kept from sweating, and, working with comfort and ease, naturally stimulated to greater production.

Among instances of the good results attending careful regard for ventilation and atmosphere in factories and other enclosed places of labour given by Dr. Leonard Hill was a large English steel tube drawing shop, where clusters of large air ducts have been installed over the heads and to the side of the workers in front of the furnaces. The air current from these is so great that when the furnace doors are shut one feels too cold and moves

away. The men are warmed by the radiant energy and cooled by the wind alternately as they draw the tubes from the furnace and pause. The effect is as congenial as the sun on a breezy day coming in and out from clouds. The output here is stated by the firm to be greater than any other factory of the kind, and industrial unrest is unknown there.

The ventilation of furnace rooms, engine rooms, etc., by fans placed at the bottom of wide trunks down which the cool air naturally sinks, the fan breaking up the air into fine streams, was advocated by the lecturer. Such fans, he said, are called "Joy Wheels" in the turbine rooms of Cunard liners.

As an example of bad atmosphere in workrooms, the lecturer described an office in which clerks audited figures for eight hours a day in a stagnant atmosphere with no windows to look out of and no breeze to penetrate. The workers complained that "there was no oxygen," "they could cut the air with a knife, it was so foul," and a rebellious girl clerk wanted to tear open the skylight. Absences from sickness were frequent in this office, yet the chemical purity of the air was unassailable. The fault lay in low cooling evaporative power and in stillness and monotony.

Radiant heat from gas or coke fires, or warmth from heating coils, should warm the floors and walls, and open windows or a system of fans to impel cool, fresh air through gratings about eight feet from the ground and extract it through the ceiling, according to the size of the room or hall, were the best methods of heating and ventilating.

Expensive Plenum systems are not wanted. There must, however, be proper control by a skilled attendant of heating coils, open windows and extract fans in offices, shops and workrooms of all classes.

Correspondence.

To the Editor of THE ARCHITECT.

The Rent Restrictions Act.

SIR,—Please allow me to thank you for the leaders you have written in THE ARCHITECT (which I take in) on the Rent Restrictions Act.

It is one of the most iniquitous and unfair Acts ever passed in my experience. No capital as that particularly in cottage property has been attacked in such a manner, and if all business men had spoken as you the Act would have been wiped out.

It is aggravating the housing question. No one will build without freedom. Here if you try to sell workmen's houses in many cases only pre-war price can be obtained.

I made my protest to the Committee, but it looks as if they are determined to perpetuate this great wrong.

Again thanking you.—Yours truly,

ELIJAH JONES.

October 27, 1922.

Bath Housing Committee are prepared to recommend the erection of another 50 houses on the Englishcombe Park site, provided that the Ministry of Health consents to the principle that no proportion of the cost of the land, roads, and sewers should be allocated to the site of these houses. The work is intended to assist the unemployed.

Follies.—III.

By Charles G. Harper.

Hardy combined the appearance, for his purpose, of Charborough tower with the ruined observatory known as "Hastings' Folly" at Horton; and also had in mind the obelisk among the trees at the hill-top of "Weatherbury Castle," hard by the old manor-house of Milborne St. Andrew, once a seat of the Pleydells and the Pleydell-Bouveries. The hill-top is a "castle" only in the sense of being crowned with prehistoric earthworks. Little can now be seen of the obelisk until you have climbed the hill



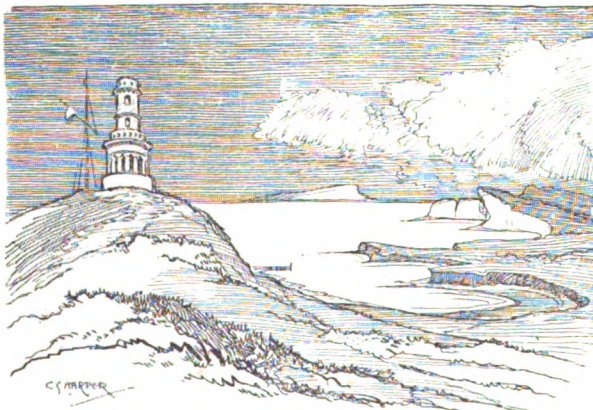
THE OBELISK IN WEATHERBURY CASTLE.

and entered the wood there. Hardy exactly describes the place: "The gloom and solitude which prevailed round the base were remarkable. The sob of the envining trees was here expressively manifest, and, moved by the light breeze, their thin straight stems rocked in seconds, like inverted pendulums, while some boughs and twigs rubbed the pillar's sides, or occasionally clicked in catching each other. Below the level of their summits the masonry was lichen-stained and mildewed, for the sun never pierced that moaning cloud of blue-black vegetation. Pads of moss grew in the joints of the stonework, and here and there shade-loving insects had engraved on the mortar patterns of no human style or meaning, but curious and suggestive."

The why or purpose of this monument is lost. As Crabbe says, "Memorials themselves memorials may need," and all we have of record is the tablet inscribed "E.M.P. 1761," pointing to it having been erected by Edmund Morton Pleydell. In the same way the remarkable pavilion, or belvedere, on the cliff-top at Kimmeridge no doubt had a story, but it seems to be forgotten. At a distance it looks noble, but a close acquaintance reveals it to be a plaster freak.

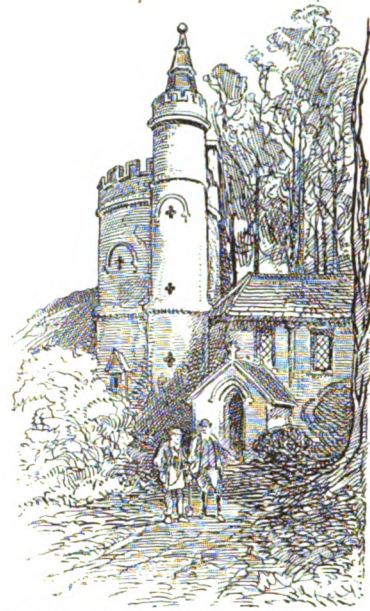
Of completely honest construction, in stone, is "Roebuck's Folly," or Midford Castle, as it is sometimes called, standing in Midford Park, near Bath. It is said to have been built in 1700 by a Mr. Roebuck, of Bath, from his winnings at cards, and to be planned in the shape of the ace of clubs, the card by which he acquired his wealth. A smaller building in the grounds, called "The Priory," but really a gamekeeper's lodge, is built on the same singular plan.

The neighbourhood of Bath is well provided with "Follies." There is "Sham Castle" on the heights of Lansdowne, built in 1760 by Ralph Allen, to form a



BELVEDERE TOWER AT KIMMERIDGE.

picturesque view from his town house. And there is Beckford's Tower, built by William Beckford, whose passion for building in sixteen years cost him over £250,000. He created the great towers at Fonthill, 278 feet and 300 feet high, and a similar one at Cintra, in Portugal. His first Fonthill tower fell, owing to the impetuous haste with which it was built. The second was burnt in 1825. His

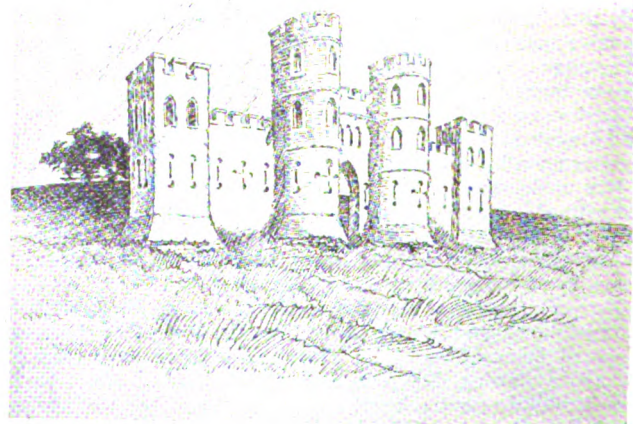


"THE PRIORY," ROEBUCK'S FOLLY, MIDFORD.

tower at Lansdowne, Bath, is 130 feet high, and was once surrounded by a walled garden. After his death his daughter, the Duchess of Hamilton, gave the property to the people of Bath, and the garden was converted into a cemetery.

Farley Mount, a prominent hill between Winchester and Romsey, is made more prominent by the odd building on its summit. It is a monument to a horse. The inscription appended to the accompanying illustration fully explains the circumstances. The obelisk, which has a little bare room inside, is built of brick, covered with plaster, and is again in a dilapidated condition.

The "Farmers' Folly," at Alnwick, is a different order of freak. It was built by subscriptions from the farming tenantry of Hugh, second Duke of Northumberland, a hundred years ago. He, it seems, had agreed to reduce their rents, owing to representations that they were suffering from the great fall in prices after the bumper years for farmers during the Napoleonic wars. In acknowledgment of this concession the grateful farmers put up this expensive pillar, crested with the Percy stiff-tailed lion, whereupon his Grace immediately again raised their rents, with the remark that if they could afford this useless pillar, they



"SHAM CASTLE," LANSDOWNE.

could very well manage to pay him higher rentals. The generally received version of the story goes on to say that at this juncture the pillar was not actually completed, and that the Duke finished it at his own cost. So the inscription, "To Hugh, Duke of Northumberland, by a grateful and united tenantry," is not without its humour.



BECKFORD'S TOWER, LANSDOWNE.

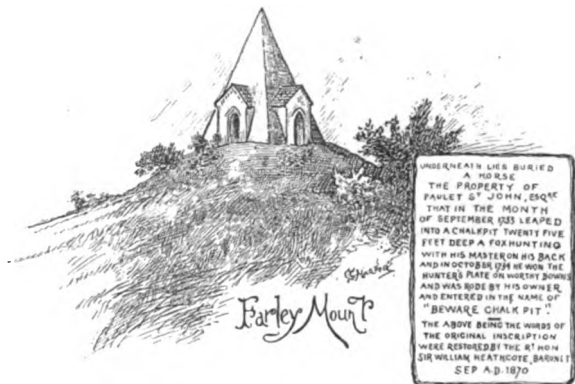
In the park of Welbeck Abbey, seat of the Duke of Portland, we may find a prime "Folly" in the series of tunnels and underground molelike burrowings of the eccentric fifth Duke, he whose mysterious life and death originated the extraordinary "Druce" legend and the consequent sensational litigation. During eighteen years he busied himself in constructing underground suites of rooms and a series of tunnels leading in all directions to and from the "Abbey." The longest goes under the lake in front of the mansion, and for nearly two miles through the park in the direction of Worksop, emerging at what is known as the "South Lodge." The present Duke, not enamoured of this kind of thing, has constructed daylight approaches, and the tunnels are falling into decay. They are not in themselves so wonderful as the legends about them would have you believe, being, in fact, merely "cut and cover" constructions, with a covering of some 3 feet of soil, and lighted partly by glass "bull's-eyes" at intervals in the roof, and in part by gas and electricity. The strange thing is only that anyone should have made them at all. Nor is the famous "underground picture gallery" or ball-room really marvellous. It is large—160 feet long, 64 feet wide and 22 feet high—but it is not actually much, if any, deeper than the average Central London basements.

"Cook's Folly" is the name given to a romantic-looking tower, to which has later been added a modern castellated residence, on a spur of Durdham Down, overlooking the gorge of the Avon, at Clifton, Bristol. This ivy-covered tower has an inscription, "I. Cook, 1693," over its doorway, the person referred to being John Cook, merchant of Bristol and sheriff, 1672-1673. The legend appertaining to it is that the wife of Sir Maurice Cook (a person of whom, or of whose period, we know nothing) was approached, just before the birth of her son, by a strange-looking man who asked charity. Not content with what she gave him, he asked more. He said he was an astrologer, to whom the heavens were as readable as a horn-book, and an unfailing reader of human destinies. The lady gave him a further sum and begged him to predict the fate of her unborn child. He promised to return shortly, and reappeared soon after

the child was born, with a prediction which has been versified:—

"Twenty times shall Avon's tide
In chains of glittering ice be tied;
Twenty times the woods of Leigh
Shall wave their branches merrily,
In spring burst forth in mantle gay,
And dance in summer's scorching ray;
Twenty times shall April's frown
Wither all their green to brown—
And still the child of yesterday
Shall laugh the happy hours away.
That period past, another sun
Shall not his annual journey run
Before a silent, secret foe
Shall strike that boy a deadly blow.
Such and sure his fate shall be:
Seek not to change his destiny."

Soon afterwards the wife died, and it became the care of Sir Maurice to avert this threatened fate. He (so the



story goes) built this tower shortly before his son had reached his twentieth year. It was made as strong and secure as possible, and the young man was begged to take refuge in it until the fatal year was past. His meals were drawn up by him from a basket, and every precaution taken to secure him from intrusion. The eve of the last day of that year came, and all were merry. They asked if there was anything further he required for the night, and he answered: "No, unless it were some fuel. The night is chilly: send me up a faggot."

The next morning there was no answer, and it was found that an adder had been in the faggot, and had bitten the young man to death. It is a tale of the marvellous, and it is not necessary to believe it.

Humorous, rather than tragic, is the story of "Perrott's Folly" at Edgbaston, Birmingham. It was built over a hundred years ago (so the story goes) by the squire of Rotton Park, so that he might from its roof see Belle Hall, where there lived a daughter who had married contrary to his wishes. But when the tower was finished he found the Clent Hills in the way.

There have been a good many London buildings styled, rightly or wrongly, "Follies." Such were thought the two immense mansions built by Cubitt at Albert Gate,



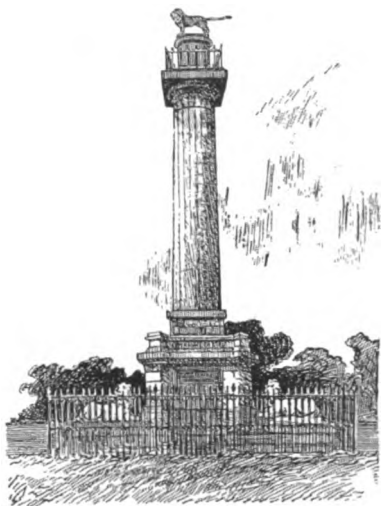
SOUTH LODGE ENTRANCE TO THE TUNNELS, WELBECK.

Knightsbridge, in 1846. The wags of that time called them "the two Gibaltars," for the reason that "they would never be taken." But they were wrong: the house on the east side was soon acquired by Hudson, the "Railway King." For many years past it has been the French Embassy, and has even been considerably enlarged by the process of pulling down some property which, incidentally, had the quaint distinction of including a church with a public-house on either side of it.

That hideous block of flats, Queen Anne's Mansions, St. James's Park, London's only approach to anything in the nature of a New York skyscraper, was at its building, some fifty years ago, named "Hankey's Folly."

But there is no end to them. There is Racton Folly, an extremely ugly brick, stucco-covered tower, with three similar flanking towers, standing about three miles north of Emsworth, in Stanstead Park. It was built about 1740 by the then Lord Halifax, to serve as a beacon for Bosham Harbour. In this same county of Sussex, in Up Park, on the summit of Harting Down, is the so-styled "Daedalian Folly," named after the purchase by Sir M. Featherstonhaugh of an estate in North America called "Daedalia." It is a tall, square building, with towers at the angles, roofless, with empty windows, and crumbling to ruin.

The "Wainhouse Folly" at Halifax is a lofty and very ornate chimney, built about 1872-1875 by John Edward Wainhouse, of the Washer Lane Dyeworks. It stands in



THE "FARMERS' FOLLY," ALNWICK.

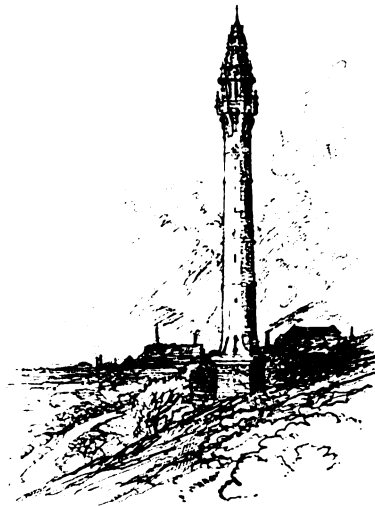
a commanding situation, on a cliff 650 feet above sea-level; and is itself 270 feet in height, and cost £12,000. The primary object was to build a chimney for providing more draught for the fires of the works in the valley; but (according to the story) in the course of the building Mr. Wainhouse quarrelled with his neighbour, Sir Henry Edwards, Bart., and made his chimney taller in order to overlook the baronet's private grounds. The chimney is faced with stone, and has a handsome corona. A winding staircase leads to the top. It was never used as a chimney, for the works were sold before its completion. There is probably no foundation for the story that Wainhouse built it to annoy. He merely wished to prove that a chimney need not be an eyesore, but the hard-headed people of Halifax cannot appreciate that point of view. Wainhouse died in 1882, and the property has several times changed hands.

Still rather hurtful to Scottish ideas is their uncompleted national memorial to Scottish soldiers who fell in the Napoleonic wars. It is called variously "Scotland's Folly" and "Scotland's Shame," and is that reproduction of the Parthenon at Athens which was begun on Calton Hill, Edinburgh, and was abandoned when £12,000 had been expended on it.

The Parthenon seems also to have been the model from which the idea of the hill-top monument at Penshaw, near Chester-le-Street, derived. This, however, was completed; not, like the Calton Hill fiasco, left derelict. Penshaw Monument was erected in memory of John

George Lambton, first Earl of Durham, in 1844, four years after his death. It cost £5,000, and commemorates that statesman's championship of the Reform movement. This building is literally a hollow sham, for its eighteen great columns are not solid.

In the wooded recesses of Quex Park, near Birchington, there is a queer building, erected in 1820, and hung with



WAINHOUSE FOLLY, HALIFAX.

a peal of twelve bells. It is done in red brick, and has a kind of openwork spire in cast iron. It was intended as a Waterloo memorial, but is now used by the Powell-Cotton family, of Quex, as a mausoleum.

The old popular ideas of spite and rivalry seem to have had some foundation in respect of two "Folly" towers at Ammerdown, near Radstock, Somerset. The first was built by Lord Hylton in his park, and is a column with a glass dome which catches the sun's rays and makes it a prominent object—too prominent for a certain Mr. Turner, who, annoyed by it, built beside the road outside the park an extremely ugly tower, 135 feet high, and declared his reason was to provide a resort for picnic parties from Wells, Radstock, and round about. He died bankrupt, and Lord Hylton bought the tower. It has once been struck by lightning. The ground floor is used as a wayside refreshment-house.

A specimen of the belvedere type of folly may be noticed beside the road between Slough and Taplow, in Chalvey Lane, Salt Hill. It is a quaint little garden-house surmounting a prehistoric mound, that mound from which Salt Hill takes its name. Here the Eton College boys assembled "*ad Montem*" on Montem Day, soliciting "salt"—i.e., donations—from travellers. The custom was discontinued after 1844.

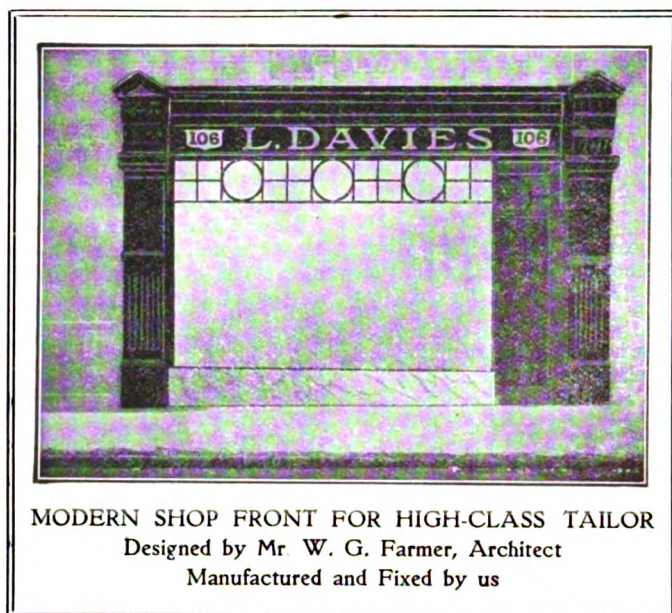
The village or suburban district of Belvedere, near Erith, in Kent, takes its name from a hill-top pleasure. The place-name, so curiously un-English, derived from an



PENSHAW MONUMENT.

eighteenth-century mansion so called, built on the wooded hill-top in a pleasant park commanding the estuary of the Thames and its crowded shipping: really a *bello vedere*, a pleasant view. This mansion was rebuilt in a "classic" style, about 1764, by Lord Eardley. The park was greatly cut up for building purposes in 1859, and the present village of Belvedere then sprang up. The mansion itself was purchased for £12,000, and was opened in 1867 as the "Royal Alfred Institution for Aged Merchant Seamen."

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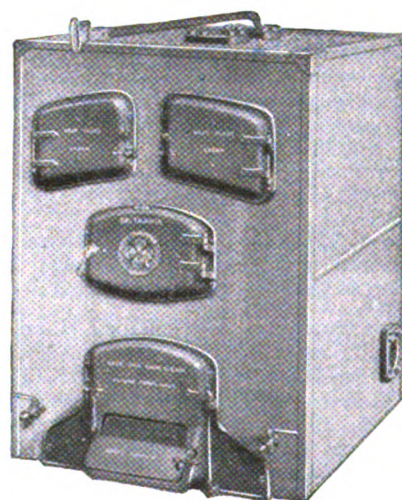
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General.

M. Perate, Curator of the Versailles Museum, has been appointed Director of the French School of Archaeology in Rome.

The cost of the Wandle Valley main sewerage works will be £181,260. Messrs. Perry & Co., Ltd., of Bow, have secured the contract.

A new hospital is proposed as a war memorial for Wrexham and East Denbighshire. It is to be erected at an estimated cost of £70,000 at Roseneath, Wrexham.

We regret that, owing to the illness of a relative, Mr. Albert Lakeman will be unable to continue his series of articles on "Modern Methods in Building Construction" for the next few weeks.

Messrs. C. Smith & Sons, architects, have been instructed by the Reading Town Council to prepare plans for an extension at the Park Hospital to accommodate about thirty cases of infectious diseases.

The Hanwell Housing Committee has reported that the Ministry of Health had approved the acceptance of the tender of Messrs. Frost and Carter for the completion of the forty-eight houses on the Council's housing site for a sum of £25,300. The contract was sealed by the Council, and the Clerk reported that the work was being commenced immediately.

At the last fortnightly sitting of Greenock Dean of Guild Court a statement was made regarding the work done by the Court during the past year. The estimated value of new buildings, additions, and alterations authorised during the session amounted to £140,600. This was a considerable increase over last year, the estimated value then amounting to £93,740.

Estimates of the cost and revenue to be derived from the proposed bathing pool on the north side of Scarborough, placed before the Town Council, show that the estimated total cost of the scheme is £68,000, and it is calculated that an annual net profit of £4,500 should be produced. For the purposes of the estimate an attendance of 1,200 bathers a day for 84 days has been thought a reasonable expectation.

It is now officially announced that the mediæval arch of Old London Bridge, discovered during the excavations at Adelaide House on the north side of the Thames, is to be preserved as a permanent memorial within the grounds of the British Empire Exhibition at Wembley Park. Mr. Tilden Smith, owner of the site of Adelaide House, and the firm of Sir Robert McAlpine & Sons, the principal contractors for the exhibition, have offered to present the arch to the Exhibition authorities, to pay the cost of dismantling it, and to remove it to Wembley.

A meeting of the Court of Governors of University College, North Wales, Bangor, was held at Chester last week. The Council reported that the plans for the new science department were receiving consideration, and it was anticipated the buildings would be begun next spring. Professor Sir H. R. Reichel, referring to the success of the lectureship founded by the Quarrymen's Union, said that out of a class of sixteen, fifteen were working quarrymen. Professor Reichel also stated that they had a site in view for the new science buildings, which would cost £65,000.

Mr. A. H. Dungay, architect and surveyor, of Alpha Chambers, Alexandra Road, South Farnborough, Hants, sends us particulars of the following works in hand:—

SHOP PREMISES, FARNBOROUGH ROAD, FARNBOROUGH, FOR MR. A. GOODALL.—Mr. F. C. Bath, Camberley, £735; Mr. T. H. Jones, Farnborough, £740; Mr. T. G. Smith, Farnborough, £750; Mr. E. Ewins, Farnborough, £833 15s.; Mr. H. H. New, Farnborough, £850; Messrs. Bowditch & Ford, Farnborough, £866 15s.; Mr. W. J. Bellman, Ash Vale, £1,028; Mr. A. E. Dalley, Sandhurst, £1,550.

SHOP PREMISES IN SAME ROAD, FOR MR. A. GOODALL.—Messrs. Ewins Bros., £585 6s.; Mr. H. H. New, £596; Mr. F. C. Bath, £633; Messrs. Bowditch & Ford, £714 12s.; Mr. H. Mundy, Basingstoke, £744; Mr. T. H. Jones, £825.

SHOP PREMISES, FOR MESSRS. G. W. BRAND & SONS.—Messrs. Ewins Bros., £1,009 18s.; Mr. T. H. Jones, £1,198; Mr. H. H. New, £1,351 4s.; Messrs. Bowditch & Ford, £1,372; Mr. F. C. Bath, £1,424.

HOUSE, SHERBORNE ROAD, FARNBOROUGH, FOR MR. H. H. GODDARD.—Messrs. Bowditch & Ford, £673 12s.; Mr. T. H. Jones, £675; Mr. H. H. New, £730 2s.; Messrs. Ewins Bros., £742 8s.; Mr. F. C. Bath, £822; Mr. D. H. Barlow, £823 18s.

Trade Notes.

The General Electric Co., Ltd., have received the following letter from Mr. A. E. Farrow, the chief engineer for the Windsor Electrical Installation Co., Ltd.:—"Undoubtedly you saw in the daily papers that there has been an accident in Windsor through two motor cars colliding with one of our street lighting standards. The standard in question was 25 ft. in height and was broken in three pieces, but you will be interested to know that the Osram lamp (200 c.p.) was not broken.—Yours very truly, (Signed) A. E. FARROW."

Messrs. Samuel Haskins, Bros., Ltd., the well-known workers in art metal, store fitters and decorators, have sent us an illustration of their new works at Walthamstow, which cover an area of 3 acres and are equipped throughout with the latest electrically driven machinery incorporating all the modern devices for producing the highest possible craftsmanship at reasonable prices. As a result of their present high standard of organisation they can guarantee completion of all contracts and delivery of all goods to specified dates—a point to which they attach particular importance. An expert representative will wait upon architects to advise on any question relative to the complete equipment or decoration of any type of commercial or domestic building.

Peacehaven, which was an area of almost waste land but two years ago, and is now on the way to become a garden city by the sea, celebrated the opening of its first hotel recently. Situated on the cliffs between Newhaven and Rottingdean, this new town already boasts some 6,000 freehold plot owners, and more than 250 houses of the bungalow type have been actually completed. The Peacehaven Hotel, quite near the sea, has been built with a view to comfort, and is surrounded by well-laid-out grounds. A large number of visitors went to Peacehaven as the guests of the South Coast Land and Resort Company, Ltd., and were entertained at a luncheon presided over by Lord Teynham, chairman of the hotel directors, who said the place possessed a building company, a water company, and electric light and power company, several shops, and a post office, and there were the beginnings of a church and a Nonconformist chapel. Mr. C. W. Neville, the founder of Peacehaven, said there were only two buildings on the site a couple of years ago, and to-day, in addition to nearly 300 houses, they had eleven miles of water main and a pumping plant to supply a town of 10,000 people was awaiting installation. Before another six months they hoped to have the place lighted throughout with electricity. Plans for a railway line connecting Peacehaven with London would be placed before the Railway Commissioners very soon, and it was hoped that work on the line would be commenced before long.

Building Activities in South Africa.

Information has been received by the Department of Overseas Trade from the office of the Senior Trade Commissioner in South Africa as to certain building schemes.

These schemes include the construction of a block of flats of the best class and elaborately fitted for residential purposes; another block of flats of the town type, and a new bank.

United Kingdom firms interested in any of the above schemes may secure further information (e.g. names of promoters, etc.) upon application to the Department of Overseas Trade (Room 42), 35, Old Queen Street, London, S.W.1. (Reference 9672/ED/MP).

"The Architect" Fifty Years Ago.

NOVEMBER 2, 1872.

FROM "THE TURN OF THE TIDE."

Nothing seems to us to show this tendency more strongly than Mr. WATERHOUSE's exhibited designs for his great Natural History Museum. Here the regularity of disposition, proper to an Italian composition, is combined with the use of the dome, the employment of semicircular-headed windows, and the absence of mullions and transoms; and yet the design is essentially Gothic rather than Classic or Renaissance, and is the production of one of the foremost Gothic architects. Something of the same character may be traced in the hotel built by the same architect in Liverpool, and in Mr. HADFIELD's hotel at Leeds; its first appearance may probably have been said to take place in the buildings of the late Mr. WOODWARD, of which there are several in Dublin, and one very graceful specimen in London (now occupied by the London School Board). If Mediæval precedents are so far abandoned as to admit the free adoption for secular and domestic works of features such as we see in these designs, and of the appliances of modern science, there seems a great change ahead certainly, but it would be one which would be legitimately a development, not an abandoning, of Gothic art; and would go far to bring modern architects into thorough harmony with the temper of the present day.

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The Building Industry and the Elections.

We may be told by many that political matters are outside the scope of a technical publication and that to allude to them is *ultra vires*. But if it can be shown that the interests of a great industry may be affected vitally either prejudicially or beneficially it may well be claimed that political consideration may and should be taken into consideration.

We may assume for the sake of brevity that there are three main divisions of candidates between whom our choice must be made, namely, Labour, Liberal and Conservative, and eliminating all questions of foreign and domestic politics which do not affect the building industry we may consider the points in the various policies and views put forward which must and do affect a great industry.

The Labour Party propose a capital levy on all incomes above a few thousands a year as a means of wiping off the debt incurred in the war without inflicting any hardship on those whose means fall short of the proposed figure. At first sight such a proposal sounds an admirable manner of getting rid of liabilities, but the wage earner would be wise to consider whether his present wages are not received from sources which would be diminished by a capital levy, and in this case the employer or capitalist may very possibly come to the conclusion that it is necessary to restrict his operations and in doing so will naturally cut down the size of his business and the number of his employees. More than this, in some cases he may even be inclined to seek some country where he may retain what he has and use it with greater freedom from State interference. Among those affected would doubtless be many of our larger contractors and many firms who may be contemplating the erection of new and larger buildings. And as the working man pays little in the form of direct taxation his relief would be likely to be expressed in terms of cheaper tea, sugar and tobacco. We do not say cheaper beer, for it is not clear to us whether the Labour Party, like some others, is not in Pussyfoot toils, and it is quite likely that the working man might not find he had gained quite as much as he anticipated. We have shown that the working man in building as in other industries would almost inevitably get less employment as one result of a capital levy, but he may console himself with the reflection that he would get an out-of-work allowance on a more liberal scale. This might be the case as long as the proceeds of the capital levy lasted, but what would happen afterwards? Presumably another capital levy which would yield a poorer harvest and so on until everyone who could not flee the country would be reduced to the same state of equal indigence. So much for what Labour has to offer the building industry!

We now come to the authorised Liberal policy as it affects the industry of building. One of the main planks of that policy is the re-introduction of the Increment Duties which in 1909 were to produce "rare and refreshing fruit." Oddly enough, their effect was to produce an immediate and marked decrease in the

number of working class houses built, which fell sharply to half their annual number and then to a fractional amount in the years immediately preceding the war. It is true that they were the cause which forced the cultivation of that rare and precious orchid the Government Housing Scheme, but this also, like the measure which gave it birth, is now abandoned. We may possibly think that a more cleverly worded Act will work the subtle alchemy of making what proved a poison in the Act of 1909 a wholesome medicine to-day, but greatly as we admire the ability of our politicians we think this may be considered doubtful. The Labour programme also includes this item, but Labour doubtless believes that the capital levy will furnish enough both to relieve the unemployment it will inevitably produce and also to finance an extensive housing policy of its own.

We now come to the Conservative programme as it affects building. The situation reminds us of the casket scene in *The Merchant of Venice*, where Bassanio chooses the leaden casket simply because it does not contain flattering assurances, for the Conservative programme is the first we have heard for many years which does not hold before our dazzled eyes the vision of a new heaven and earth. Here are no "rare and refreshing fruits," but simply the pronouncement that economy in administration and freedom to work out our industrial salvation are to be secured to us.

This freedom from interference is what the building industry has been asking for for many years, and perhaps after our experiences during the last decade it is the best thing we can have. If so, the members of the building industry will know how to cast their votes, if indeed they are not wholly altruists or do not find in the various policies submitted to them something which counterbalances material loss.

We claim in this short survey to have given as far as possible an impartial summing up of a political issue looked at from a purely trade standpoint, though one which may possibly be regarded as somewhat sordid and mean by those possessing greater and more poetical imagination than we can lay claim to.

Lowell was absolutely right when he said "we see dimly in the Present what is small and what is great," and it is largely because it is so difficult to determine what effect legislation on any intricate subject may have that a policy of *Festina lente* may be best for all of us. It is unquestionable that in political matters we might from time to time ascertain privately that what politicians call burning questions hardly arouse a ripple of interest in the average man's mind, which is concentrated on more practical and immediate problems which can only be solved by personal effort and endeavour. The real function of government seems to us to give us peace and security behind the shelter of which we can attend to our own concerns, and if the average man believes that one political party is more likely to give him that than another the consideration should be sufficient to determine his choice.

Our Illustrations.

HOUSE AT KILNQAY, FLUSHING, FALMOUTH.—Messrs. W. A. FORSYTH AND H. P. G. MAULE, Architects.

DESIGN FOR STUDIOS.—W. S. GRICE, Architect.



FRONT VIEW. HOUSE AT KILNQAY, FALMOUTH.—Messrs. FORSYTH AND MAULE, Architects.

House at Kilnquay, Falmouth

The erection of this house was commenced after the War, the plans having been prepared some time previously by Messrs. Forsyth & Maule, F.F.R.I.B.A., of 309 Oxford Street, London, W.1.

The construction is throughout in English oak, a good deal of which had been reserved for the work and had undergone a special weathering process.

The foundation walls, upon which the framing rests, together with the lower parts of the chimney stacks, are built of local Cornish granite interspersed with small pieces of tiles, in the case of the stacks, working up gradually to the thin bricks forming the flues above the roof level.

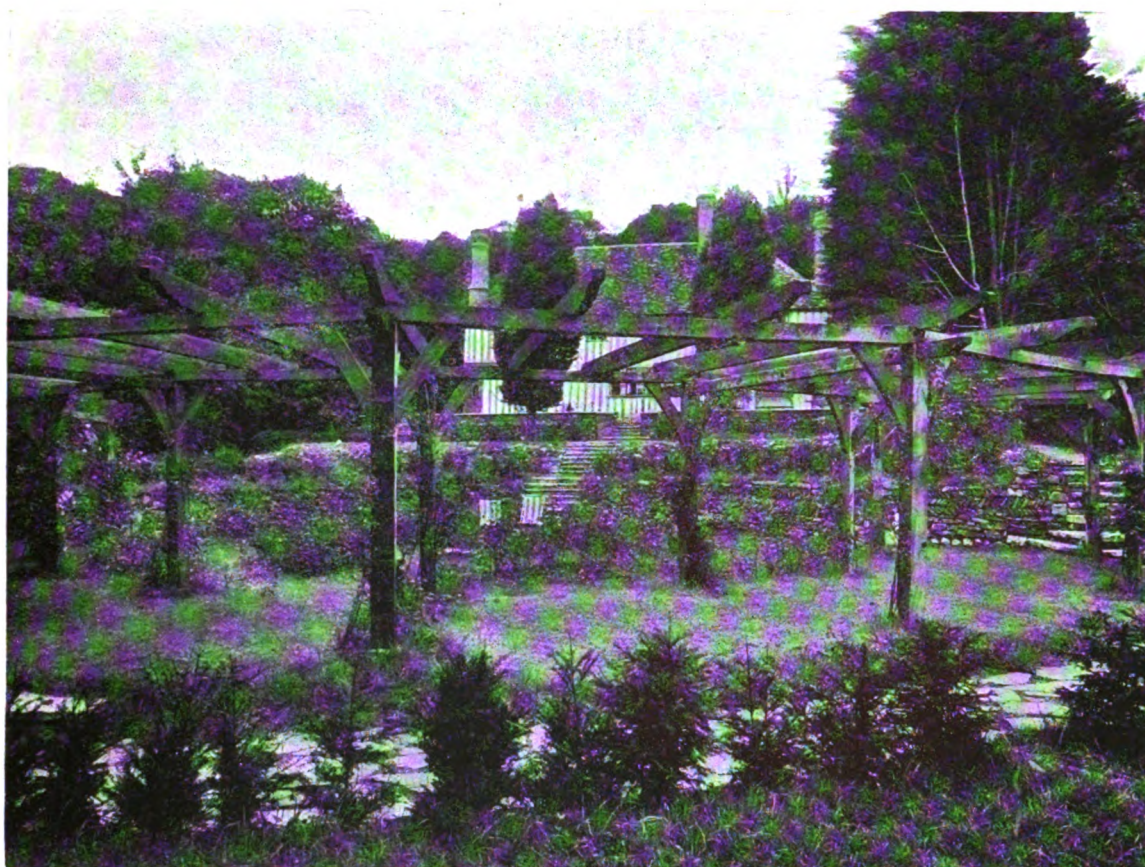
The walls are constructed of oak studs, framed into sills and plates, with stout angle posts and brackets hewn out of one log. The studs are grooved and filled in with slates, backed by concrete slabs, lathed and plastered on the inside, the slates being rendered on the face and afterwards plastered flush with

the oak timbers. The latter are all left from the adze, or rough planed.

The roof is formed of oak rafters, boarded, felted and tiled with dark, hand-made tiles.

The site is an exposed one on the edge of the cliffs, bordering the sea-front, but in spite of its situation the methods of construction employed have been successful in rendering the house watertight. The character of the building was based, at the client's desire, upon a Kentish farm-house, with overhanging upper storey at either end of a large central Hall, the roof being continued through without a break, forming a large eaves over the recessed portion of the front. In the construction of the oak floor, which, cantilevered over the framing below, forms the basis for the projecting studding of the upper storey, the traditional method of a diagonal beam with radiating joists has been followed.

The charm of the house is greatly enhanced by its situation in the midst of a terraced garden, in which a semi-circular oak pergola and granite retaining walls, form prominent features.

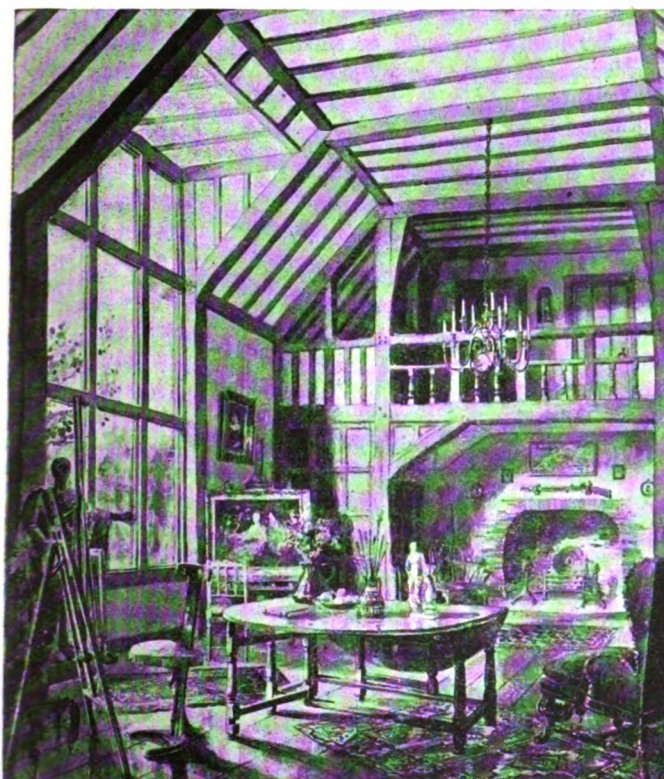


GARDEN VIEW, KILNQVAY, FALMOUTH. Messrs. FORSYTH AND MAULE, Architects.

Studios at Ealing.

The drawings represent a scheme for providing an Artists' Quarter. Built upon an existing old-world garden, the studios will vary in accommodation, the largest type having studio, hall and four bedrooms, small kitchen, etc.; and the smallest type, studio, one bedroom and hall, small kitchen, etc.

The building will be in brick and half timber and tile roofs, simple in design and honest in construction. A development of the scheme is the adaption of an old house to a club for art members, the club to contain a large studio for exhibition purposes, clubroom and restaurant, and studio flats on the 1st and 2nd floors above. The existing garden will be disturbed as little as possible, and the whole atmosphere to be aimed at is one of seclusion. Mr. W. S. Grice is the architect.



"The Architect" Fifty Years Ago.

NOVEMBER 9, 1872.

A NEW DANGER FOR THE INSTITUTE.

The otherwise cheerful tone of the opening meeting of the Royal Institute of British Architects was dashed by a very melancholy but inevitable interlude, which threw a temporary gloom over all present. We allude to the presentation by subscribers of two portraits of past Presidents.

These works are so surpassingly unsatisfactory as likenesses, that it was a matter of no surprise to find that Professor Donaldson—always kindhearted and considerate—abstained from being present; doubtless in order to avoid giving the subscribers the pain of contrasting the portrait with the original. His genial features are, however, too familiar, and his kindly expression is too well remembered by all frequenters of the Institute for this to have been of much avail in softening the silent disappointment of the meeting. Mr. Beresford Hope, his fellow-sufferer, was wiser, and with a manly self-respect so showed himself that every person could notice how he differed from his effigy; and could see for himself that it was possible for him to sit out an evening without a glass stuck in his eye, as in the caricature on the walls. It is not unnatural that the friends of the present President should desire to shield him from a similar fate, and accordingly the meeting was not surprised to learn that the distinguished brother of Mr. Wyatt will himself give his portrait, of course retaining the right to name the artist, and, had this not taken place, Mr. Wyatt would, it was stated, have given it himself. This must be put a stop to. It is quite difficult enough already to get architects of high standing to occupy the post of President of the Institute, and if the position is for the future to be held only under the penalty of being so painted as Mr. Donaldson and Mr. Beresford Hope have been, or else of having to put hand in pocket and pay for a satisfactory portrait unless a friend will do so, it will become impossible. The members will, of course, be very glad to have a good portrait of their valued present President, and a memorial of the goodwill of so eminent a member as Sir Digby Wyatt; but it must be the last. A crumb of comfort may be gathered from the fact that there are some dark corners in the Institute rooms, and if the new portraits are hung in two of them, their shortcomings may perhaps manage to escape notice; but the intentions of the subscribers, who of course hoped for something like the portraits of Owen Jones and Cockerell, or at least for a work as moderately satisfactory as the Tite portrait, have been frustrated.



KILNQVAY, FALMOUTH. Messrs. FORSYTH AND MAULE, Architects.

Notes and Comments.

The Signing of Buildings.

A number of letters have appeared in "The Times" on the perennial subject of the signing of buildings by their designers. We believe that this is a good thing, and one which might add to the interest of our streets in future years, but we think that the name of the builder and the date of erection should also be added and that an attempt should be made as far as possible to secure some uniformity of size and position of such lettering. A curious little point occurs to us. We may suppose that such notices if cut in stonework or carried out on a metal plate might cost a couple of pounds, a small item which would not be noticed by the average client if inserted in a specification or bill of quantities. But if it were noticed it would be interesting to find out the proportion of clients who would raise the objection that the lettering was an item for which they were disinclined to pay, for it is curious to notice what small items many men object to. Another plan which has something to recommend it would be for each municipality or authority to keep a book of sites in which the successive rebuilding in any street could be traced and referred to. We do not say that such a record would entirely take the place of the signing of an actual building, for it would not give information to the casual passer-by, but it would as time went on provide a valuable and useful record and could give little trouble to the compiler, as the book would be made up at the time plans were submitted to the usual authorities.

Is Linoleum Furniture ?

An amusing little case, which raises the question of whether linoleum should or should not be considered as furniture, has been the subject of a County Court action at Brighton, and a subsequent appeal from the decision of the lower court. A flat was let at a rent of £20 a quarter, including the use of the linoleum, and an application was made to the County Court judge that the rent should be lowered to the usual standard. He held that though the linoleum was furniture it was too trivial a matter to take the rent out of the application of the Act, but on an appeal being made Mr. Justice Avory considered the County Court judge had taken an incorrect view of the High Court decision by which he held himself bound. In his view it could not be held that a house with some of its floors covered with linoleum could be fairly described as a furnished house, but Mr. Justice Salter dissented, stating that in his view linoleum was furniture in the ordinary sense of the word, and he did not consider that the County Court judge had any dispensary power to look to see whether the amount of furniture was large or small. If he thought that the County Court judge, in deciding the issue, in good faith excluded from his mind the relatively small amount of furniture he would have decided he was wrong and would have sent the case for retrial, but such was not the case. The appeal was dismissed, but leave to appeal further was given.

The point is a curious and interesting one, and is an instance of the difficulties caused by the Rent Restriction



SUMMER HOUSE, KILNQVAY, FALMOUTH. Messrs. FORSYTH AND MAULE, Architects.

Notes and Comments.—Continued.

Act. We should consider that linoleum was furniture in the broad sense of the term, and that it is so frequently left in a house as not being worth removal that its presence could hardly be considered to entitle anyone to claim that the house was partially furnished.

Village Clubs

A useful little pamphlet on village clubs and their design has been issued by the Village Clubs Association, 80 Pall Mall, London, S.W., which contains a few illustrations and some typical plans of clubs of various sizes, together with some model rules for the management of such bodies. It is a somewhat odd thing that though the requirements and uses of a village club are obvious to nearly everyone, there is no class of building as to the design and wants of which there seems to be more doubt in the mind of the public, and the book on the subject which Sir Lawrence Weaver has written will be found by all to be most useful. A village club is too often built by the assembling together of a few unsightly sheds or temporary buildings, examples of which are to be seen all over the country. Such buildings cannot be considered as being permanent structures, while they form eyesores which spoil the effect of many of our most beautiful villages. It would be infinitely better if adequate funds are not forthcoming to wait, but there is one consolation, which is that the reservoir of temporary war buildings is bound in a short time to be exhausted.

Hard Woods Now Manufactured.

It is reported from Germany that pine, poplar and other ordinary woods may be converted into hard wood by a

recently patented process, rights to the use of which have been obtained by American business men.

The work is done in a hydraulic apparatus, which compresses ordinary soft woods to the point where they are so heavy that they will sink in water. Any desired colour of wood can be obtained by putting a stain by pressure through kiln-dried wood before the actual compression is accomplished. Then the whole structure has the same colour. Ebony is obtained with black stain; mahogany with a rich dark brown stain.

It is impossible to distinguish the fabricated hard wood from the natural, for it has all of the characteristics of weight, wear and beauty, say the German experts.

During the war it was rumoured that the Germans had a secret process for making gun stocks out of ordinary wood, while other nations were searching for hard woods for a similar purpose. The process is an extension of one used for many years in producing imitation carved wood. A pattern is pressed into kiln-dried wood the protruding surface of which is planed to the depth of the pressed pattern, which swells when the wood is later steamed, giving the effect of relief work.

An Appreciation of the Unknown.

In a recent issue of the *Studio* a short account is given of the houses of Mulberry Road, in Chelsea, which are illustrated by some good sketches. The writer wonders whether they are the work of several different architects or of a single architect, but evidently has not tried to get information on the point. This is a pity, for a very little effort would have enabled him to ascertain that the houses in question were designed by Mr. Alfred Cox for a speculator who built them. They are admirable examples of what can be effected by employing a good

architect, for the houses are small in size, and none of them are expensively built, yet they give an effect of harmony and pleasant variety which we often go far to seek in newly developed districts. Some of them may not be "austerely cheerful" enough for the academic critic, but the concessions made to the popular love for variety and picturesqueness do not militate against their being delightful and effective. Mr. Cox is one of those architects who has not had the full measure of appreciation which is his due, for we have never seen a design of his which was not instinct with the pleasant charm which we find in old English building and which often escapes the architects of to-day.

Reclaiming the Black Country.

Dangerfield Road, Wednesbury, in the heart of the Black Country, has been transformed by the efforts of a number of workers, who have stripped off the layers of debris and turned the land into gardens from which good crops have already been obtained. The work has been carried out under the Midland Vacant Land Cultivation Association. It is estimated that there are 30,000 acres of waste land in the Midlands, of which 11,000 are in South Staffordshire, and the work carried out at Wednesbury is only one of several cases of reclamation; in another case a farm of 27 acres occupies a site of what were abandoned pit mounds and spoil banks. Similar efforts were made in and round Duffryn, in Glamorganshire, by the first Lord Aberdare, under whose direction the colliery banks were planted with trees. Work of this kind is admirable, but we suppose its wide application must in the end depend on the use which can be made of reclaimed land and the cost of reclamation. We do not know in such cases where all the debris is disposed of, but suppose it goes down the pits from which in former years it was brought up.

The Cost of Building.

Mr. H. R. Selley, in an address to the London Property Owners' Association, said the Geddes report and the anxiety of the Ministry of Health to get private enterprise to commence operations should convince all reasonable citizens, and especially the taxpayer, that the Government were not house builders. One must be fair and admit they did not seek the job; the imperative demand for houses after the war compelled them to take action. The abnormal costs prevailing at that time and the shortage of men and materials all tended to rush up prices, and this same cause, coupled with money stringency, prevented private enterprise from entering the field. To-day they were near to what must be post-war normal conditions. They were able to gauge the output of labour, material could be delivered within a few days of ordering, and there was plenty of healthy competition, both among builders and merchants. Those who professed to know held that the cost of building could not fluctuate more than 10 per cent. below present prices. If this was so, all they had to do was to ascertain those prices and see if an economic return in rent could be obtained on the outlay. If the answer was in the affirmative, then houses should be erected at such a rate as to meet most of the public needs.

As one engaged in house building, he said without hesitation that the cost of building to-day compared with pre-war prices was 100 per cent. on. The Director of Housing had stated 80 per cent., and the Chairman of the L.C.C. made the same assertion. He must point out when dealing with houses of to-day there was a great difference in the construction and finish compared with pre-war houses. To compare a five-room house of both periods was not a safe guide. Under the modified specification the storey had been cut down to 8 ft. against 9 ft., there were no footings, party walls were not carried through the roof and were usually reduced to 4½ in. walls above the ceiling joist. The internal work was one coat of solignum as against four coats of oil paint, and many other items accounted for the apparent difference.

The points of divergence between pre-war and post-war standards are in our view very fairly stated in the foregoing passages.

Wall Papers.

The "Daily Herald" states that the "modern up-to-date father" has come to the conclusion that distempered walls are healthier than papered ones, and that for that reason papers would be less frequently used. We doubt whether this is correct, and should have thought it more correct to say that the empire of wall surfaces has for many years past been fairly divided between papers and distempers. It is really more a question of whether we like plain wall surfaces or patterned ones; if the latter, it seems unlikely that many will care to use stencilled patterns on distemper, for though they can be applied cheaply enough and were formerly used, the effect given is rather crude compared with that of paper. The same criticism does not apply to many of the methods of producing variation on the surface of a plastered wall, and slightly irregular and uneven finish is very preferable to a dead level surface which is hard and mechanical. Anyway, the question of health need not be considered, and does not touch the question except that if rooms are distempered instead of papered they are likely to be oftener renewed, as the process is cheaper. As against this we may say that a certain amount of dust is often given off a plastered wall which does not occur if it is papered, so that there is little to choose between the two methods hygienically.

Competition News.

Members of the Society of Architects are requested not to take part in the Ryde (I.O.W.) Pavilion Competition without first ascertaining that the conditions have been approved by the Council.

Competitive plans are invited by December 1 for the Howden new Wesleyan Sunday School. Particulars may be obtained on application to Mr. G. Saville, secretary, West Grange, Howden, East Yorks.

Architects practising in the City of Leeds are invited to submit competitive designs for extensions to the Maternity Hospital, 42 Hyde Terrace, Leeds. Particulars from Mr. C. E. Warren, 61 Albion Street, Leeds. Deposit (£2) will be refunded on receipt of designs, or on return of all papers and intimation of non-participation within seven days of obtaining same.

Messrs. A. Thomas and F. G. Barker, architects, Liverpool, have been awarded the first premium of £100 in the competition for a public hall and swimming baths at Lytham, which it is proposed to erect at a cost of £85,000.

A Correction

On September 29 we illustrated Staple Manor, Dorset, as the work of Mr. Briant A. Poulter, Architect. It should have been given under the joint names of Messrs. P. Morley Horder and Briant A. Poulter, Architects. We regret the mistake.

A further batch of 60 houses is to be built by the Doncaster Corporation on the Carr House estate, and tenders have been let to Messrs. Forsdyke & Co., of Sheffield. The houses are of the non-parlour type, and are to cost £345 each.

The Rector of St. Clement Danes has purchased the freehold of the building that contains the Roman bath in the Strand. Mr. Bickford proposes to open the bath all day and every day on payment of a small fee.

Delegates from over fifty London building societies met at the Holborn Restaurant on the 3rd inst., and decided to form a Metropolitan Building Societies Association. Mr. Harold Bellman, of the Abbey Road Society, is acting as honorary secretary.

The Walsall Housing Committee recommend the acceptance of the tender of the Unit Construction Company (Limited), Birmingham, for the erection of 39 houses in connection with the Corporation housing scheme at a total cost of £12,723, which works out at a cost of £320 each for 20 houses in two blocks, £326 each for 12 houses in two blocks, and £333 each for seven houses in one block.

At the final meeting of the Southport Town Council for the past municipal year a discussion took place as to the site of the new secondary school for boys. Considerable opposition was offered to the suggestion that it should be built on low-lying land not far from the inner boundary of the borough, and preference was expressed for the original site at the north end of the promenade. The cost of the school is estimated at about £80,000. The matter was sent back to the Education Committee for further consideration.

London Art Galleries.

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The Goupil Gallery Salon is the twelfth exhibition of this series, which was commenced in 1906 with the view of bringing together the works of artists of various tendencies: and the display which opened last week keeps up the character of work which is generally modern in character and frequently very interesting in technique. We feel this in the paintings of Mr. Wilson Steer on the ground floor, in his six watercolours in the small gallery, very fresh and cool in their colour, and in the oil paintings, notably "The Ferry," in the large Gallery. Near these Walter W. Russell has two admirable studies of the coast near Shoreham, with what is locally known as Bungalow Town appearing in the distance; and two works respectively by Courbet, "Effet de Neige," and Camille Pissarro, "Le Clocher de Bizaucourt," are in the same note of clean, fresh colour. In his "Politics" James Pryde has given us a high vaulted gallery, in which most of the pictures seem, intentionally or otherwise, hung out of line; which possibly reflects the effect on the mental vision of the British voter when a number of vociferous politicians are clamouring for his vote, on the ground that their special path is the short cut to an earthly paradise.

In the upstairs rooms I was at once impressed by Adam Slade's "Romney Marsh, from Rye," which has something of the clean colour and sense of space to be found below in Wilson Steer's paintings; and the series by Louis Sargent of Switzerland, beginning with the giant peaks of the Eiger and Monch, are delightful in colour. The selection in the two rooms here, including work by Manguin, Walter Bayes, Maurice Denis and Roussel deserves attention, but I pass on now to the third Gallery, where Betty Fagan and Laura Knight are well represented, the former with a head and shoulders of a typical sporting gentleman, the latter with "A Dressing Room at Drury Lane," with two ballerine putting the last touches to their costume. In his "Jets d'Eau," Henri Le Sidaner, who generally appears in these exhibitions, has attempted a fine thing—and very nearly succeeded. Entirely admirable is his daring rendering of misty morning light catching the water and vaporous background; but the canvas seems too big for his subject, the foreground too empty, and the whole painting needs bringing together to make it the success it deserves to be. Near this Davis Richter shows some well-handled tulips, and Orlando Greenwood has a good figure in this room of "The Blue Girl."

At the Fine Art Society's rooms, on the same day as the Goupil Salon, Leonard Richmond opened an exhibition of pastels and watercolours of Italy and France. The Italian subjects are largely occupied with Florence and, still more, with Siena. Even apart from its historical interest and wonderful art of the "quattrocento," the old city of the Palio has still unique qualities of artistic interest, and evidently appealed strongly to Mr. Richmond; she appears again and again in these studies—twice in "Landscape near Siena" on the first wall, in "La Fondiaria, Siena," in the market scene in early morning, and those great vaulted arches which span the narrow streets that climb up to the marvellous Cathedral are handled with good effect. The most serious rival to Siena here in subject matter is Le Puy in France; and, in fact, three of the best paintings here, in my judgment, besides the admirable study of "Villa Medici, without Florence," lent by H.R.H. Princess Mary, Viscountess Lascelles—are "Breaking Clouds, near Le Puy," "The Loire, near Le Puy," and, best of all, the watercolour of "The Bridge at Briève, Le Puy." In "The End of the Day—St. Vincent, near Le Puy," the artist has combined pastel in the sky, and watercolour in the foreground and middle distance. In despite of the Horatian maxim, that to painters as to poets

"Quidlibet audendi semper fuit aequa potestas,"

I do not regard this combination of two mediums as altogether desirable; and I remember once, when staying on the Italian Lakes with Paolo Sala, the veteran President of the "Society of Lombard Watercolour Artists" ex-

pressed himself most strongly against these mixtures of pure watercolour with other mediums, which are so frequent (and I must own often so clever) in modern Italy.

At the Greatorex Galleries—which, by-the-bye, have just been effectively enlarged, giving an extra room which could be available for a smaller exhibition, and would hold easily forty watercolours—Mr. Percy Smith is exhibiting coloured drawings and etchings and drypoints. The coloured drawings of cottages in Yorkshire and of Puisieux Church are well drawn and warm in colour; but the most important side of the display is, of course, that of the etchings, since the "War Landscapes" and the "Dance of Death, 1914-1918," are very remarkable contributions. The War landscapes—and, I imagine, probably, too, the War Figure subjects—were done during the war, and have been put away till recently. In the "Dance of Death" nothing more "macabre," more grotesquely terrible, even by the late Mr. Strang, who essayed this field of subject, has been achieved in recent times than these scenes, such as "Death Marches," "Death Awed," and the repellent "Death Intoxicated." In the etching of "The Three Scythers" the artist gives us a charming composition, very delicate in the handling of line.

At the Medici Society, only a few doors away in Grafton Street, are being shown, in co-operation with the Marées Society, a group of some twenty reproductions, fifteen of which are after Edouard Manet. These include his famous "Déjeuner sur l'Herbe," which was exhibited, after being rejected at the Salon, at the Salon des Refusés, and raised at once a perfect storm of criticism around the artist and his work, which was repeated—or surpassed—with his later "Olympia." The original seems to be now at Berlin; and the reproduction here of the little group seated on the grass, as well as those of a "Woman on the Shore" and "Sea off Bercq-sur-mer," with its glowing colour, appear to be most satisfactory.

Two important exhibitions open to the public this week, to which I shall give attention in my next week's notes. These are the exhibition of work by the Royal Society of British Artists in their Galleries in Suffolk Street, and that of a collection of paintings by the Russian painter, Repin, at the Leicester Galleries. No artist in Russia bore a higher name than Ilyn Repin, and before the present "débacle"—which appears to have affected the public collections of that country—his work was to be found in the Museums and private collections of Russia. He will be represented here in a number of characteristic paintings and drawings, including his famous portraits of Tolstoi and that of Kerensky, made in 1917. Repin was born in 1844, and is still alive—not in Russia, but in his home in Knokola in Finland.

Members of the Architectural Association are holding an exhibition of the holiday work of members—sketches and photographs—which remains open till the 23rd of this month. Most of the sketches are in watercolour; but Mr. Stanley Hamp, President, shows some good crayon studies and Mr. Basil Champneys some oil paintings. I reserve till later my notice of the 23rd annual exhibition of the Hampstead Society of Artists, now being shown at Walker's Galleries, as well as the watercolours of China and Central Asia by Miss E. G. Kemp, F.R.S.G.S.; and the drawings of Majorca by H. Franks Waring, on view at 182 Sloane Street. An old friend of mine in the Midlands, Sir Whitworth Wallis, the able Director of the Birmingham Corporation Gallery, lectured last week at Leighton House on the King's pictures at Windsor and Buckingham Palace. Two Nottingham sculptors, Messrs. Rayner Hoff and James Woodford, have won the Rome Scholarship for sculpture for 1922, of the value of £250 a year, tenable for three years at the British School at Rome. Mr. Solomon J. Solomon's painting of the Guildhall Lunch of 1911 was taken over for the Guildhall Art Gallery last week, by the Lord Mayor, at the Suffolk Street Galleries.

S. B.

The Halifax Town Council last week received sanction to borrow £250,000, for the purpose of carrying through a housing scheme free from Government control.

London of the Future*

By Sir Aston Webb, P.R.A.

Some time ago I was talking to a man who had some rather dingy lodgings somewhere near Lincoln's Inn, and we got talking of London. He said: "It is no good talking about London and improving London; it is the dirtiest, the vastest, and the ugliest place that there is, and you cannot do anything; no one cares about it; it is no good trying." However, I talked a little more, and he said: "Well, look here, come and dine with me." I said "I will come and dine to-night, if you like, and we will talk it over." As I had been told that he gave nice little private dinners, I accepted the invitation and I went, and he did give a very nice little dinner. "Now," he said, "we will go into the smoking room and talk about this absurd idea of yours." So we went. He began again chattering along about it was "impossible to do any good," and all the rest of it, so that I got rather sleepy, and by degrees I found that I went to sleep. It was not a very polite thing to do, but I did it, and I found myself all of a sudden on what appeared to be the top of the lantern of St. Paul's. By the side of me was a very interesting man who it appears had been told off as my guide. I looked up, and there was a bright blue sky and a hot sun, a beautiful sun; and I looked down, and there was a winding river below of bright blue. On the river there appeared to be pleasure boats and men apparently fishing. I mentioned that once before, and the papers who were good enough to notice it at all said it was a ridiculous idea. I said to my guide: "But where am I?" He said: "Don't you know?" I said: "Well, I have a sort of idea it is something like London, but it is not London, indeed not the London I know." He said: "Well, it is London, but it is London about 100 years later than you; we had about 80 or 100 years' work at it since you were here." I said: "Well, you have done a great deal in that time. How did you set about doing it? We tried in our little way to do something. What did you do?" "Well," he said, "the first thing we did was this. In your time, you may remember, you had a good many conferences. Well, I believe you found they did not do very much good?" I said: "No; I believe they did not, although I am not sure. I am not a politician. But there were a lot of conferences all over Europe." "Well," he said, "we did not have a conference; we got together a few of the best-brained men we could, and asked them to come and form themselves into little batches and see what they could do for London; and they did, and the first thing we decided that must be done was to alter the government of London as it was in your day, and to alter the air of London. Those were the two things to start with. I will not go through all the details of the government of London, except that it is quite obvious that London could not expand and improve with forty various bodies all controlling different parts of its area, and with two great bodies of the City Corporation and the London County Council more or less pulling against one another. After a great deal of trouble and a great deal of care we managed to arrange so that there was a certain unity between those bodies, and there was one body to control all the main services of London—that is to say, all the great roads, all the great arteries through London. Take the trams: it was absurd. In your time a tramway was allowed in one borough and was not allowed in another. A service cannot get on like that. If you have to get out and walk across one borough to get in a tram at the other end, that is not practical politics at all. We managed to get all that put straight.

"Another committee had been considering all the time the pure air of London. We all came to the conclusion that as long as London was subject to fogs and smoke and dirt, such as it was in your time, we should never do any good." I said: "Well, I remember something of that, because we had at the Local Government Board a Committee, on which I sat, to try to stop the smoke of London. We issued a report." He said to me: "What happened to that report?" I said: "The usual thing." He said: "But all the same there was something in it; we read your report. We found that you discovered that the factory smoke of London could be stopped; there was only one little technical difficulty, that you could not proceed against anybody unless they issued black smoke, and there was a great discussion as to what black smoke was, and no one quite knew. They said it was blue, and they said it was all sorts of different colours. It was not black, so you could do no good with it;

but that we easily changed too. This Committee also said that three-quarters of the smoke of London arose from the domestic fires of London, and that you had no control whatever over those; therefore that was the trouble that you were set against. We found when we looked into it that there were smokeless fuels which were an excellent substitute for soft bituminous coal, but the difficulty was that they were too expensive; so we set to work until we had reduced the cost of this smokeless coal to less than the price of bituminous coal, and when we had done that we made it illegal to burn bituminous soft coal in domestic fires and in ranges. The result of that was that the range at once went." My guide continued: "I am told that you used to burn 15 to 20 tons a year of soft, smoky coal in your ranges mainly for the sake of heating water. That was all done away with. We also took a great deal of trouble to reduce the price of electric current to a penny. At 1½d. you could cook by electricity as cheaply as by any other means you had; so we could do it very much more easily. We started a propaganda, and within a very short time gas fires and electric fires were used for every purpose except to heat water, for which coke was still used." I said: "Well, that is very good; you have done very well. We very nearly did it in my time. As far as I was concerned I had given up burning soft bituminous coal for some years. I only cooked by gas, and I had gas fires in my bedrooms and in all my sitting rooms but one." He said: "Well, that is why you see London as it is to-day." I said: "Well, I remember, now you mention it, that in 1921 we had a very bad coal strike and for about three or four months there was no coal at all burned in London, and London was a delightful and beautiful place; you could see all over it and its views."

I asked: "What about this fishing?" He said: "Do you not know that in Queen Elizabeth's time the Thames was full of fish; so much so that in the articles of apprenticeship in those days there was always a clause that their apprentices were not to be fed with Thames salmon more than three times a week. Therefore it did not seem such an impossible thing that fish should come back to the Thames. Of course we had to purify the water. We purified the air as I explained to you; now we had to purify the water. It is not a pleasant subject; we will pass over it as quickly as possible; but the sewage of London was all pumped up and down; it had to go up, then down, up and then down, until it reached Barking, and it was there discharged. All this matter discharged at Barking passed in suspension up and down London past London Bridge up to Westminster Bridge. When the tide went out it went down again, and then there was a fresh supply came up the next day. That did not seem to be a very desirable thing, so we provided some locks and weirs on the river. In your time they only went as far as Richmond; now they go as far as London Bridge, and fish flourish like anything."

I said: "Well, that is very delightful; so you can have row-boats." He said: "Yes, we have row-boats and sailing boats and it doubles the area of pleasure grounds for London; we had the parks; now we have the Thames on which the people can enjoy themselves throughout. As we are on the River, I may as well point out to you another thing we have done: We have embanked the Thames on the other side, the Surrey side." I said: "We talked of that for years." He said: "Yes, you talked of it, and we have done it; that makes all the difference. We reclaimed so much land that it really pays, or very nearly pays, for the cost of the improvement, the embankment. You know what an improvement an embankment was on the one side." I said: "Yes, we were proud of it, more so than almost anything else." He said: "And we are just as proud of the other side. We have got a great road which runs all round the embankment from Westminster Bridge to Blackfriars, with trees just as it is on the other side, except that unfortunately you, in your time, built the County Hall right on the river front so that the road cannot go up to Westminster Bridge. Of course everybody makes little mistakes, and that was a mistake, and it is too late to alter it, so it is no good talking about it, but there it is." Then he said to me: "You know the Government had announced that when that was built they were going to put the rest of their public offices on that side of the river. The County Council have also done it. So they bought up the land facing the river as far as Waterloo Bridge, and they also bought a large piece of land beyond to give to the London University, because the site at the back of the British Museum, which they had granted to the London University, was absolutely wanted for the extension of the Museum in the future, and they decided to give that to the British Museum for its extension, and to build the University where it could be seen by men on the river front."

* At a dinner of the Imperial Industries Club held on November 3 at the Hotel Victoria, Northumberland Avenue (Sir George Hayter Chubb, Bart., J.P., President, in the chair), Sir Aston Webb, P.R.A., opened a discussion on "London of the Future." Sir Aston carried his audience on a magic dream carpet to the dome of St. Paul's and described to them all that he saw and learnt of the improvements carried out during the century in which we now stand.

I think you will all agree with me that in a great capital like London, the greatest capital of the world, the capital of the greatest Empire in the world, there are certain things which you expect to see when you get there. When you get, as I was, on the top of St. Paul's, you expect to see the Houses of Parliament, of course, the centre of the Empire; you expect to see the Churches, St. Paul's, Westminster Abbey; you expect to see the Municipal Buildings like the County Hall and the Mansion House, and surely you expect also to see the great seat of learning, the University of London. At present you can see nothing. It occupies a few corridors in the Imperial Institute, which does not accommodate it very well or very magnificently. But my guide said: "We have built a real University, not the class rooms and all that; we have retained the other Universities, King's College, University College, Gower Street; all those we have retained, but we have built a great administration block on the river, with a great hall for their functions, and in a place where everybody can say, 'There is the London University.' Blackfriars Bridge was getting in a very unsafe condition. We widened Blackfriars Bridge to double the width, putting up the old facings on either side, because we considered Blackfriars Bridge one of the most beautiful in London, and we have driven a great road from Blackfriars Bridge, which, if you look on the map, you will find leads straight to the British Museum, then it branches from there on either side of the Museum straight to Euston, so we get what we have always wanted, a great cross-communication from Euston to Charing Cross." I said: "Well, you have done very well over that; I wish we could have done it; we had very much the same idea, but we were not able to carry it out."

Then he said to me: "Do you see a little sort of square down in Hammersmith; I think you will be able to see it quite well from here now." I said: "Yes, I see a little square in Hammersmith, and a statue there." He said: "That little square is called Richmond Square, and the statue in the centre is to Sir William Richmond, who was the founder of the Smoke Abatement Society, the founder of really the abolition of smoke in London. He was jeered at all the time, but he never minded that; everyone laughed at him; but if you ask the chemists now they will tell you that the purification of the air of London commenced with Sir William Richmond's Smoke Abatement Society."

Then he said: "Of course, this embankment of the Thames on the south side, and these buildings coming there, altered the whole of Southwark. I believe in your time nobody ever went there." I said: "No, we never went there, we knew of it, we knew it was there, but we did not go." He said: "Now we all go; we have driven a straight street from the corner of Westminster Bridge to the corner of London Bridge, and that is by far the shortest cut to the city; it is a great wide street, it has trees on both sides, and it has a tube railway under it, and all the traffic goes very quickly from one end to the other. We have left the Strand, because the Strand is such a delightful, charming and picturesque place and you cannot get along it, so we have left it as it is, and we get from Westminster Bridge to London Bridge in five minutes easily, no obstruction at all; there are trams down the centre and two rows of cars on both sides. That is what we call a road." I said: "Yes, it sounds like a good road." He said: "So, of course, Southwark has been practically rebuilt, and it has become now every bit as valuable as the centre of what you used to call the West End. We admit that that was started by your London County Council when they put up their Hall on that side of the river."

Then he added: "Before quite leaving the Thames one must mention the bridges again. I have mentioned the Waterloo Bridge; that we rebuilt in about 1950"; and I interrupted: "Something seems to have happened to Charing Cross; what is that? The bridge I remember at Charing Cross was not at all a pretty thing." He said: "We called it a most infernally ugly thing, and we got rid of it; that was one of the first things we did, to get rid of it." I asked: "What was the cause of that? One of the things I regretted in my lifetime was that we had no national memorial of the war. We had a great many small memorials spread all over the country, and very charming and very necessary and desirable they were and proper to be put up; but," I said to him, "I did regret, and many of us regretted, that there was no great national memorial; people seemed hardly to realise that they had had a great victory and we ought to be proud of it and put up a memorial. After Waterloo there was Waterloo Bridge, there was Waterloo Place, there was Trafalgar Square; we made a great deal of it, but in my time there was no national memorial." He said: "Well, we have made one." I said: "I am very glad. However, what is it?" He said: "Well, it is a great road bridge at Charing Cross. We have put the railway below the road bridge and a great place at each end, which forms our Great War memorial. We tried to make as magnificent a bridge as we could, and we have put

houses on that bridge, or rather shops. When you go across that bridge—I will take you across presently—you will see there are shops on both sides of it, and they afford most desirable shelter, so, instead of crossing Charing Cross bridge in the rain and getting wet through, you pass along shops all the way, and you hardly know when you come to the end of it. Of course, as you remember, London Bridge was covered with houses, and the wealth of the great Bridge House Estates Committee, which has so much to spend at the present time, was all derived from the houses which were on old London Bridge. For some reason, when the old bridge was pulled down they did not put up the houses again, I do not know why, but we have done it now at Charing Cross, and we find it is bearing a very large share of the interest of the money which it cost to put up that bridge."

I said to him: "What about the railways and the roads. The air is very clear and you can see very well all about, but I cannot see the railways; where are they?" He said: "Well, you cannot see any in the distance even although the smoke has all gone. Now that electric traction has become so general all the railways now go underground 15 miles from the centre of London. That has been done in America, of course in New York, but it had not been done in your time. We divide the traffic; the suburban traffic is separated outside London, and that goes in separately from the main line traffic, and you can now go from St. Albans to Shooters Hill, or from Epping Forest down to Richmond, without a change; you pass right through under the city instead of going very tediously through the crowded streets in the centre of London. That has relieved the traffic of the streets enormously. The main line practically does the same. A very large underground terminal station, like the Pennsylvania Station at New York, has been founded at Euston and another has been made at Waterloo. At Euston the station is linked up with King's Cross, St. Pancras, Paddington and Liverpool Street; they are all connected underground with this main one, and the trains shoot right through under London to the terminus at Waterloo, which links up with London Bridge and Victoria. We have a great traffic underground from Euston to Waterloo, with branches on to the Inner Circle lines, which take you without change to almost any point in London."

I asked: "But how do you do all these things; what are your rates just now?" He said: "They are all right." "And the taxes?" He said: "Oh, you knew all about taxes in your time; those have been very much reduced. Most of our improvements have been made, if not to pay, at any rate not to be very costly; and when the lines were put underground, of course the surface tracks were turned into roads. They were ready to be turned into roads at hardly any expense, and there were magnificent frontages on all these roads which have recouped to a large extent the cost of the underground railways. The improvement in tunnelling has been very great, and the cost of it is very much less than it used to be, and therefore it is not such an impossible thing as in your time you may have thought it would be."

Then I said to him: "What about the parks; I see that they look beautifully kept. Have you any improvements there?" He replied: "Yes, rather. One of the first things we did to the parks was what was suggested in your time by Mr. Willett." I said: "I remember that; I knew Mr. Willett very well; he often talked of it." He said: "Mr. Willett, who was the author of sunlight saving, used to contend that the parks are for the people, for everyone to enjoy. They are not to be guarded so much that you hardly enter them; they are to be made as great an enjoyment for the people as possible. For one person that went into the parks one hundred people walked outside those great gloomy railings shutting them off, and did not enjoy the parks at all. Mr. Willett always suggested those railings should be put back 25 or 30 feet, and that that strip with the grass and the trees should be thrown into the road, with a path down the centre and the old pathway and the road turned into the road, and then you would be able to enjoy to a certain extent the park in the road. That was done in your time in Birdcage Walk. Lord Crawford, First Commissioner of Works, formed a delightful little drive all along Birdcage Walk, on the St. James's Park side, with the trees, the little avenue and grass. The consequence was, Piccadilly was widened 25 feet by a little bit off the Green Park, and beyond that from Knightsbridge Road up to Kensington it was widened on the other side by taking a little off Hyde Park. You do not take it off: you merely put the railings at a different place."

He continued: "Along the whole of Bayswater Road the railings are put back and you can see we have got a beautiful avenue, and if you go along it on a fine evening—or almost at any time—you will find people walking along there and enjoying themselves enormously and appreciating very much the improvement that has been made." Then I asked, looking round, "Right away in the distance there seems to be a sort of girdle of green right round

London, somehow or another. How did you do that ? " Well," he said, " we looked into the whole question of parks and open lands because we thought that was one of the most important things for the happiness and well-being of the people, and we found that there were ample parks on the north-east—Epping Forest and all that part ; ample parks on the south-west—Richmond Park and all there ; and they were very deficient on the north-west and very deficient on the south-east—Shooters Hill, and so forth, and up St. Albans way. So from time to time the municipal authorities, whenever there was an opportunity, purchased land in those two corners, until now we have got fine park-lands in the four corners of London—the north, east, south, and west corners ; and we have joined those four parks together by using what we call the waterways. London is surrounded with little streams—the Brent and the Colne and the Lea, and many others—with land on both sides, which is swampy and quite unfit for building, and has never been built upon, and which we purchased at a very small price and turned those into parkways as we call them, waterways or parkways connecting the parks all round London. And so, although London is an old place and largely built on, we have been able to a great extent to give it, what every garden city is supposed to have—a green belt of trees round it.

" Then there has always been an idea that nothing must cross the parks except on foot under any circumstances ; it would never do : nothing on earth, either above the ground or under ground, must ever cross the parks. But after very exhaustive inquiries it was proved undoubtedly that a tube railway 90 feet below the surface in no way affected the parks, either by sound or by drainage, or anything ; and so we have been permitted to take some tube railways under the parks, giving exactly the connection north and south that was so much wanted. And we also came to the conclusion that one or two drives across the parks as they are used so much in Paris would be rather an advantage than otherwise—to have a little traffic even across the parks ; they are not as sacred as all that." I said to my guide : " Some time ago, you know, we did make a road from Buckingham Palace up to Piccadilly and planted trees and made an avenue on either side of it ; but there was a fear that something might drive along it, and so it has been turfed over and it has never been used." My guide said : " We made certain roads, and we think now that we have used them for some time that they are rather an advantage to the parks than otherwise." I said to my guide : " Of course in Kensington, where I used to live, the only cross drive we had from Kensington to Bayswater, Notting Hill Gate, was Church Street, about 25 feet wide in parts—any amount of buses, and so forth, going along it ; and it was once proposed that, as we had a magnificent road in Kensington Palace Gardens, we might drive down there, but it met with horror that such a thing should happen, that any taxis should drive down that road." But my guide said : " Well, all I can say is we have done it since, and nobody minds it at all ; and it is one of the greatest improvements and conveniences for the public that there could be."

Then I said to him : " You seem to be an extraordinarily able man to have turned London inside out ; have you been able to do anything with aviation ?" He replied : " We have not done as much with that as we hoped. The one great difficulty with aviation in London we found is to get landing places. They require to be an enormous size, and, of course, you cannot have them in the park. One very great aviator proposed that Hyde Park should be roofed in with flat sheets of plate glass about 150 feet above the ground and that the aeroplanes should be allowed to come down on the top of that. But that never fructified, and it has been the one great difficulty. There is no very great saving if you have to go out to Hendon or any long distance to get into your aeroplane ; at any rate it has prevented people from doing it." But my guide said : " Lately we have been experimenting, and we have nearly perfected an arrangement by which an aeroplane instead of coming down straightway like that is made to revolve on its centre and come slowly down and down on to a place not very much bigger than the aeroplane itself, and we quite expect that very shortly that will be done, and when once that is done we shall have air flying to a great extent. At present," he said, " it is largely a matter of mails and carriage of goods, but there is a difficulty in the carriage of goods that people who travel underneath it are a little afraid that sometimes these goods may get detached and fall on their heads."

Then I said : " One of the most serious things that we tried to deal with, and did not deal with very successfully, was Housing. What have you done about Housing ?" " Well," he said, " we found that very difficult too." I said to him : " We felt when we were in London that the general overcrowding was one of the things that London ought to be, if it was not, thoroughly ashamed of. It was a blot on London, and a blot on Londoners, and a blot on everybody who had anything to do with the management of London. At the same time nobody in my time—

and I spoke to many an authority—could suggest a way by which the slum properties of London could be got rid of." He said : " No, that has been our difficulty, but we have had one advantage : In rebuilding Southwark we were able to provide a large area for housing under proper conditions, and we devoted that to housing. We went on very different lines from your housing schemes which you had after the war." I said : " Don't be rude ; we were not altogether so bad, but we did not carry it out as far as we intended." " Well," he said, " we were able to clear a site in Southwark and build proper houses, and from some of the crowded areas of the East End we took the people and put them into the Southwark area under proper conditions. That enabled us to pull down that East End area, build that up properly and move the people from another area into that, and so by degrees, although it is a very slow process, we believe we are succeeding, but the difficulty we have found, and no doubt you found, is not only to put the people into proper homes but to make them live properly when they have got there—to use them properly."

I said to him : " What do you think about zoning, which we heard of so much in America ?" He said : " Well, zoning means, does it not, deciding which districts of a certain city should be occupied by certain people ? After a long and careful enquiry the experts came to the conclusion that that was a mistake ; that it is a good thing to mix the people to some extent, and that it is a great thing for poor people to have some in a better condition living amongst them and near them and who will take an interest in them in the old-fashioned way. Therefore we are not altogether in favour of zoning and the separating of the poor from the rich, and so forth. We think it very much better that that should not be so."

Then I interrupted : " My friend with whom I have been dining, I am afraid, is rather expecting me down, so I must ask you to tell me the rest as quickly as possible. I am standing on St. Paul's, am I not ?" He said : " Yes." I said : " I am glad to see St. Paul's is here still, because in my time it was in a very dangerous state, and I happened to be on the Committee which inquired into its condition, and we had great difficulty in those days to wake London up to the fact that St. Paul's was in rather a dangerous condition ; but we did get a good deal of money, and we did the best we could to put it into a sound condition." " Yes," he said, " St. Paul's is here and you need not be afraid, it will remain here ; we are proud of St. Paul's and think it is the finest building in London, and we take great care of it." I said : " What is that ? the Bank of England ? is that just down over there ?" He said : " Yes, that is the Bank of England." I said : " It looks very different from what it did when I was here." He said : " Yes, of course it does, because owing to the enormous bank rate, the enormous war loans that there were, the Bank became entirely unsuited for its purpose and we could not carry on the business there, so we carried up the centre of the Bank. We have left the walls ; if you walk round there when you go down you will find that it looks very much the same outside, but it has about three or four times the accommodation that it had before." I said : " There are two other very large buildings in the distance ; what are they ?" He said : " One is the National Gallery. So many of the great people unfortunately after the war had to give up their houses, and many of them sent their great pictures to the National Gallery, and our Government, which was an enlightened Government, thought it was a fine thing to keep these pictures in England instead of letting them go elsewhere, and they agreed to build a gallery sufficient to take the whole of them ; and now we have the finest collection of pictures in the world. We intend to keep them here, and they are not for sale ; they will remain here. 'The Blue Boy' was one of the last that left this country ; since then we do not sell them." I said : " What is the other building ?" He answered : " That is the Royal Academy." I said : " That is a much bigger building than it was." " Yes," he said, " the fact is that the Government found that the Royal Academy had maintained itself without a single penny charge to the Government for 150 years, and they thought it was about time they should do something for it ; they gave them the site at the back and assisted them to build their new schools, which they sorely wanted, and additional galleries. There, again, the Government of our day considers that art is as necessary as any other adornment of life, and that those who are interested in art provide themselves with the world's happiness, and those who do not have no idea of it."

Then I said : " I am glad to see that your buildings do not go up like sky-scrapers ; you do not seem to go in for that." " No," he said, " we do not go in for that, and America is sorry now ; they would like to pull them down. They cannot ; but they are sorry." Our streets, even with the improved atmosphere would never allow high buildings. There has been a suggestion of that ; there have been great people who suggested very high buildings, but it has not taken on. What has happened

with our buildings to a great extent is that they are now all flat roof buildings and that gives people gardens on the top. It came across most people that slate roofs were always getting out of order, and you were always having to put in slates, and those slates always required fresh ones put in elsewhere, and tiles the same. The water was always coming through. We now have flat roofs and asphalt them and we have no trouble at all, and they form gardens, and now that we have no smoke people go up there to smoke, which does not, of course, interfere with the purity of the atmosphere."

"Well," I said, "I must really go; my friend wants me"; but I said: "Is that Buckingham Palace? Is that still Buckingham Palace? Is there a king there still?" "A king," he replied, "of course there is, and we have made that palace worthy of him. It is as fine a palace as there is in the world, and we have as fine a king as there is in the world. There are not so many kings in the world as there were in your time, but we think more of ours than we ever did, and the people are more prosperous and are more loyal and more devoted to the Crown than ever they were." I said: "Thank you, good day; that is the best news I have heard for the whole of this time." While I was saying that, I sort of yawned, sort of half opened my eyes, and I found myself in the little dingy room of my friend in Lincoln's Inn, and I said: "I am afraid I have been to sleep." He said: "Yes, and you have been snoring." I said: "I am very sorry, but I would like to tell you what I have dreamed." He said: "Don't say a word about it. It is no good; London is a miserable, dreary place, you cannot do any good to it." That gentleman is here to-night, and I do not suppose that anything I have said will convert him to any other opinion.

Housing and the Elections.

We give portions of a manifesto issued by the National Federation of House Builders, as we are in general agreement with their point of view.

The National Federation of House Builders desires to draw the attention of all Candidates and Voters in the coming General Election to the necessity of a National Housing Policy being adopted, which will produce houses with the greatest rapidity, and with the least expense to the public purse.

The disastrous condition of the present housing position in both town and country is a menace to the Nation.

Before the recent legislation affecting land and houses was passed, the savings of the people were invested in houses to the extent of upwards of £20,000,000 every year. From 80,000 to 100,000 houses were built yearly, and the free competition of private enterprise led to a progressive improvement in the standard of housing. The houses erected in this country by the house builder immediately before the war were better houses for comfort and convenience than have ever been erected, and were the cheapest in the world.

The housing programme of the late Government has resulted in a loss to the public of £600,000,000, which will have to be paid for by a charge of ten millions a year for the next sixty years, and the shortage is greater than ever, for the houses built are not sufficient to provide accommodation for the increasing population.

The living conditions of the people have been thrust back for a generation by the failure to realise that if investors are driven away houses cannot be built.

The greatest problem which the new Government will have to face will be the Housing Question. If it is approached from a broad-minded and generous standpoint the difficulty is not insurmountable. If the following programme is adopted there will be a rapid increase in the building of houses of all sizes and in the course of a few years the housing shortage will become a thing of the past.

The Federation make seven suggestions, viz.:

1. All restrictive legislation should be withdrawn at the earliest possible date.
2. All local authorities which build houses in the future should be compelled to charge economic rents except for the clearing of slum areas.
3. If any State assistance is granted for housing it should be granted equally to all agencies building houses of a good type.
4. Every endeavour should be made to encourage the people to invest their savings once more in house property.
5. All methods of encouraging the citizen to purchase his own house should be examined and adopted if they promise to add to the available housing accommodation.

The following matters will assist those who desire to buy their own houses:

- (a) The loan of capital on mortgage under the Small Dwellings Acquisition Act, 1899, and the liberal working of that Act.
- (b) The extension of assistance to building societies, to enable

them to lend a larger proportion of the cost of a house. This would enable those with small capital to secure a house of their own.

(c) The exemption of new property from local rates for a period of years. This course has been adopted in other countries with great success, and the late Minister of Health says it is worthy of consideration. It would enable thousands of people to purchase a new house who cannot face the heavy outgoings.

(d) The development of the Land Registry system of registration of ownership. This would reduce the cost to a purchaser.

6. Local authorities should revise their by-laws in order to cheapen the cost of building and road making so that houses can be let or sold at a reasonable figure.

The building regulations in many districts are out of date and increase the cost of houses and rents unnecessarily. They should be made uniform throughout the country as far as possible. A wide discretion should be given to local authorities to permit of building by new methods; and the most economical standard should be adopted consistent with sound construction.

[We doubt whether it would be wise to further reduce the standards set in local by-laws, as they are, as modified recently, by no means onerous —ED.]

7. Local authorities should be empowered to lend money on mortgage to responsible builders developing estates and erecting houses of approved types.

This can be done without loss to the rates and will enable many houses to be erected of the best type; the more houses built the cheaper they will be.

The Federation suggest that candidates should be interviewed to ascertain their views on these points, which is reasonable as long as it is not made a determining factor, as there are many other even more important issues before the electorate.

R.I.B.A. Special War Examination.

The Board of Architectural Education announce that candidates may sit for this examination in London, Liverpool, or Leeds in December, 1922 (11th to 14th inclusive). The method of conducting the examination has been revised. There will be no oral examination on the day following that on which the work on the design subject is completed. At the close of the examination on the 14th December the designs of all candidates will be forwarded to London for consideration by a special jury of the Board of Architectural Education. The jury will have discretionary power to call any particular candidates to an oral examination which will be held in London *only* at a later date. These candidates will be required to bring their approved testimonies with them to the oral examination.

Forthcoming Events.

Friday, November 10.—Town Planning Institute. Meeting at 92 Victoria Street, Westminster. Presidential Address by Mr. H. V. Lanchester, F.R.I.B.A. 6 p.m.

Institution of Heating and Ventilating Engineers. Meeting at the Engineers' Club, Coventry Street, W. Paper by Mr. M. Kinoshita, M.Sc., entitled "Instruments for Heating and Ventilating Engineers." 7 p.m.

Monday, November 13.—Surveyors' Institution. Meeting at 12 Great George Street, Westminster. Presidential Address by Mr. J. M. Clark. 8 p.m.

Tuesday, November 14.—Illuminating Engineering Society. Meeting at Royal Society of Arts, John Street, Adelphi. Reports on "Progress during the Vacation and Developments in Lamps and Lighting Appliances." 8 p.m.

Thursday, November 16.—Rheims Cathedral Fund. Meeting at R.I.B.A. Galleries, 9 Conduit Street, W. Lecture by Sir Isambard Owen on "Rheims Cathedral." 8.30 p.m.

Incorporated Institute of British Decorators. Meeting at Painters' Hall, Little Trinity Lane, E.C. Paper by Mr. T. P. Bennett, F.R.I.B.A., entitled "Woodwork." 7.30 p.m.

The late Mr. George Vickery, A.R.I.B.A., of 50 Gresham Street, E.C., and Stradishall, Suffolk, has left property to the gross value of £108,678.

Mr. G. S. Harris, of Paignton and Torquay, has acted as quantity surveyor in connection with the following contracts for which Messrs. W. G. Couldrey & Son, M.S.A., A.R.I.B.A., were the architects: Villa at Galmpton, £1,798 (Mr. W. Smaridge); bungalow at Marldon Hill, £1,052 (Messrs. Endicott & Mathews); a house at Churston, £1,815 (Messrs. Pitman & Hayman); and a house at Marldon. Mr. Harris also prepared quantities for a villa to be erected at Newton Abbot by Messrs. Hugh Mills & Sons for £2,862 from the designs of Messrs. Rowell, Looke & Son, of Newton Abbot.



Fig. 1. THE CLOCK TOWER.



Fig. 8. LAMBETH BRIDGE AND ST. MARY'S CHURCH.
Fig. 3. LAMBETH PALACE AND ST. MARY'S CHURCH.



Fig. 2. VICTORIA TOWER.

The Thames at Westminster

SKYLINES AND SILHOUETTES.

By Henry Hyams

The finest skylines on the Thames at Westminster are those seen from the embankment beneath St. Thomas's Hospital. At one end we get a view with the Clock Tower on the left, Westminster Bridge on the right, and two pierced domes in the distance, as illustration No. 1. The skylines seen from the other end of this embankment give us Victoria Tower, the Abbey, and the dome of the Wesleyan Central Hall: a very striking grouping; illustration No. 2. The summer sun sets behind these distant buildings, and later in the evening the moon is reflected in the river. Old Lambeth Bridge shows up in very picturesque outlines and reflections farther to the left. All things considered, the views from this bit of the embankment are by far the finest along the Westminster river, and they would be even finer viewed from a higher level, especially looking up the river. It is difficult to understand why St. Thomas's Hospital was ever built here, for if this site had been laid out in terrace-gardens it could have been made the most attractive part of the Thames in Central London. From nowhere else could we have had such a splendid panorama: Lambeth Palace would have been in view on the left, next the old bridge, then Victoria Gardens with the skylines of the Central Hall and the Abbey, then the Houses of Parliament, and finally on the right, Westminster Bridge and the new County Hall. Future generations, no doubt, will take away the hospital and lay out the site in terraces and gardens.

From Victoria Gardens the skylines viewed across the Thames are not so fine, although we have Lambeth Palace, St. Mary's Church and Lambeth Bridge. No. 8 shows the bridge viewed from the other side.

Rodin's group of sculpture, "The Burghers of Calais," is in a corner of these gardens. Everyone who sees it asks: "Why is it placed so high on such a huge pedestal, and why is it cramped in a corner of the gardens?" No one seems to know. A note about it in Mr. and Mrs. Pennell's "The Whistler Journal" (page 236) runs thus:—

"He (Rodin) seemed so pleased at getting into society that he allowed the English to treat his sculpture as they chose. . . . He always insisted to J. (Joseph Pennell) that his work should be placed in the light of nature; *en plein air*. . . . Therefore his acceptance of the British treatment of his Burghers of Calais is a proof of how badly his head was turned.

The group in his studio, or in exhibition, and when finally set up in Calais, was placed on a pedestal about a foot or so high, in order that one could see the whole composition and the chained feet of the figures. But some brilliant genius in England conceived the idea of sticking it upon a pedestal copied from Colleoni in Venice, high in the air, so cutting off the feet and ruining the design. MacColl told us Rodin was delighted with it. Probably the idea was MacColl's."

Anyhow, the present treatment of the group is only one more example of how lacking in artistic feeling Londoners are.

It is curious to find how badly the seats are arranged on the river at Westminster. On walking from Blackfriars Bridge up to the Clock Tower, through Victoria Gardens, down Grosvenor Road to Vauxhall Bridge and back again on the other side to Westminster Bridge, we do not find a single seat from which the river itself can be seen. The seats should be raised on steps and arranged differently. The river wall, too, is a great hindrance to anyone interested in the life of the Thames. Other large rivers have no parapet walls at all; and it is not obvious what useful purpose a high, thick wall like that at Westminster can serve. If it is meant to prevent young Izaak Waltons from falling into the river, surely other methods of prevention could serve as well; such as a projecting ledge of stone or iron grille just above high water mark, or even a low light iron railing, instead of the huge wall as at present.

Viewed from anywhere the Houses of Parliament group splendidly. From Vauxhall they and old Lambeth Bridge make fine silhouettes and skylines: illustration No. 4. From Waterloo Bridge they make a good group seen across the water as in illustration No. 5, as well as the view straight up the embankment between the trees.

A part of Lambeth Bridge seen against one of the huge towers at night with the lights reflected in the river gives us one of the best things on the Thames. At night the Thames is seen at its best; in the day-time there are too many hideous buildings by the river side, too much dirt and ugliness. As Whistler wrote: "The evening mist clothes the riverside with poetry, as with a veil, and the poor buildings lose themselves in the dim sky, and the tall chimneys become campanili, and the ware-houses are palaces in the night, and the whole city hangs in

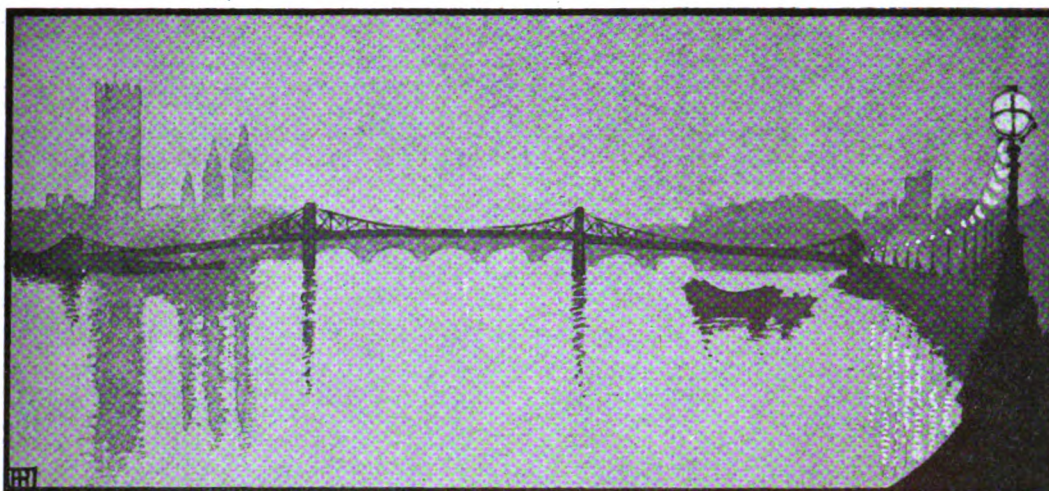


Fig. 4. HOUSES OF PARLIAMENT AND LAMBETH BRIDGE.

the heavens, and fairy land is before us." At sunset, too, the colour around the Thames is wonderful to those who look for it. Even the smoke from the funnels of the tugs is not always sooty black, but ranges through different shades from a pale greenish yellow down to a deep chocolate brown, as an artist's notebook will show. The pale smoke from the smaller chimney on the tugs and barges is not always a delicate cobalt tint. The reflections of lights, green, red, white, and so on, of skylines and silhouettes, different shapes and colours of tugs and barges—all these form a fascinating study. Even in the daylight the Thames is full of interest. A great barge laden with bales of yellow straw and carrying a white sail suddenly appears out of the mist; now five or six inky black coal barges towed by a tug sweep down with the tide. For the artist there is no end of new pictures.

Waterloo Bridge is a favourite subject with painters, viewed from either side, or at a close view. When the tide is at its lowest and just about to turn, one sometimes finds at a still autumn daybreak that the water is so calm that everything is reflected as if in a mirror, as illustration No. 6.



Fig. 5. HOUSES OF PARLIAMENT.

Skyline and silhouette then assume more than double importance, for, inverted, they seem to increase the decorative values while exaggerating the faults. A good skyline of the dome of St. Paul's can be seen from the embankment at Waterloo Bridge and from the river near by. Cleopatra's Needle always makes a good silhouette, viewed from any angle.

It will not be long, we hope, before Charing Cross Bridge is taken down, the railway station put on the other side of the river, and a new bridge for road traffic built at a lower level. It would be interesting to discuss why it is that this bridge is so ugly. Is it because the steelwork does not show to the eye its stress functions, as it does at Lambeth and Westminster?

Charing Cross Bridge is not the only thing of ugliness that will have to be abolished from this part of the Thames; there are many mean buildings and hideous flash-signs.

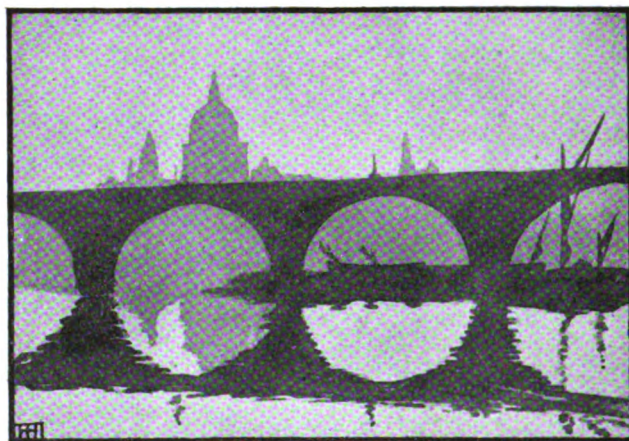
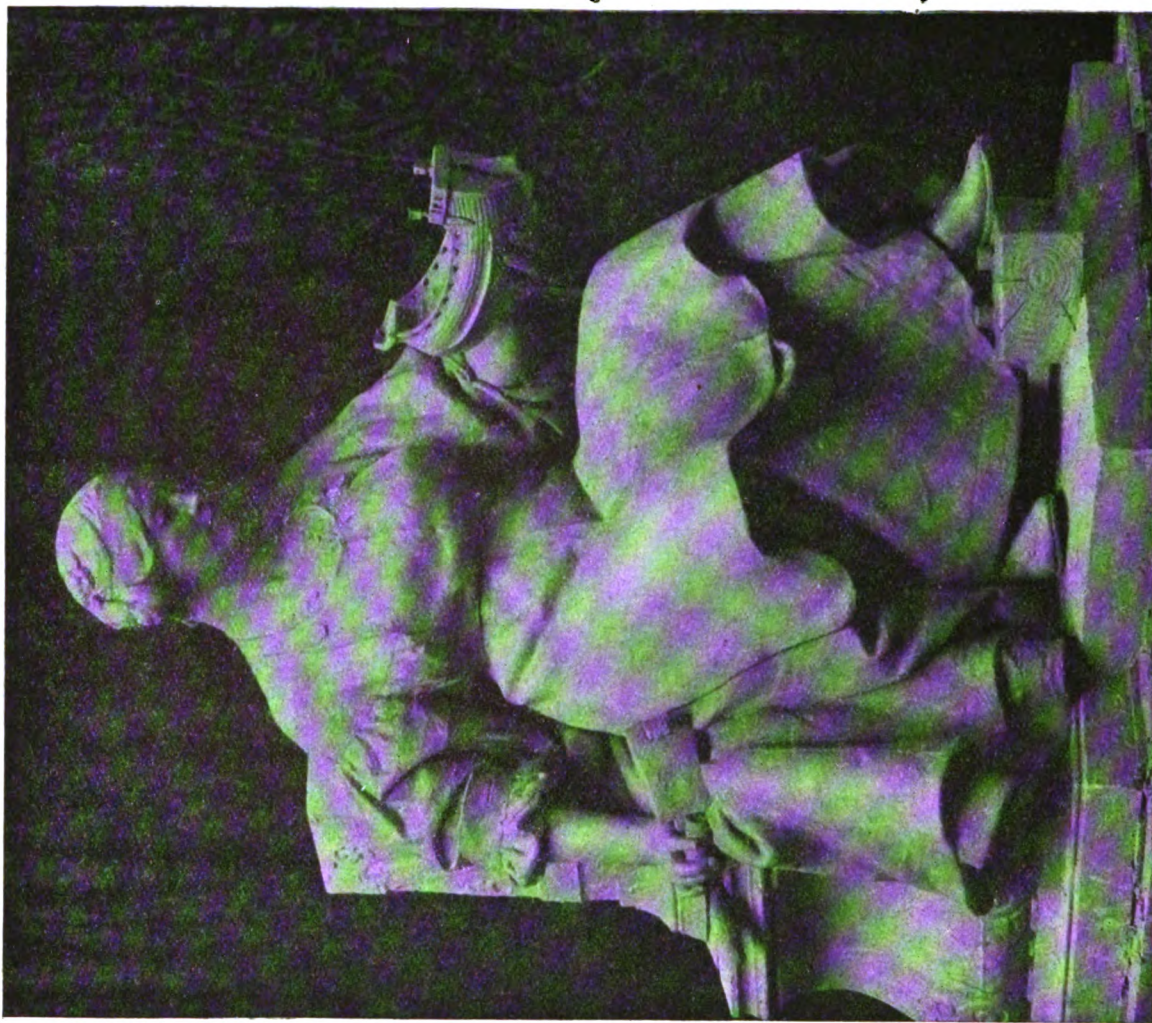


Fig. 6. WATERLOO BRIDGE.

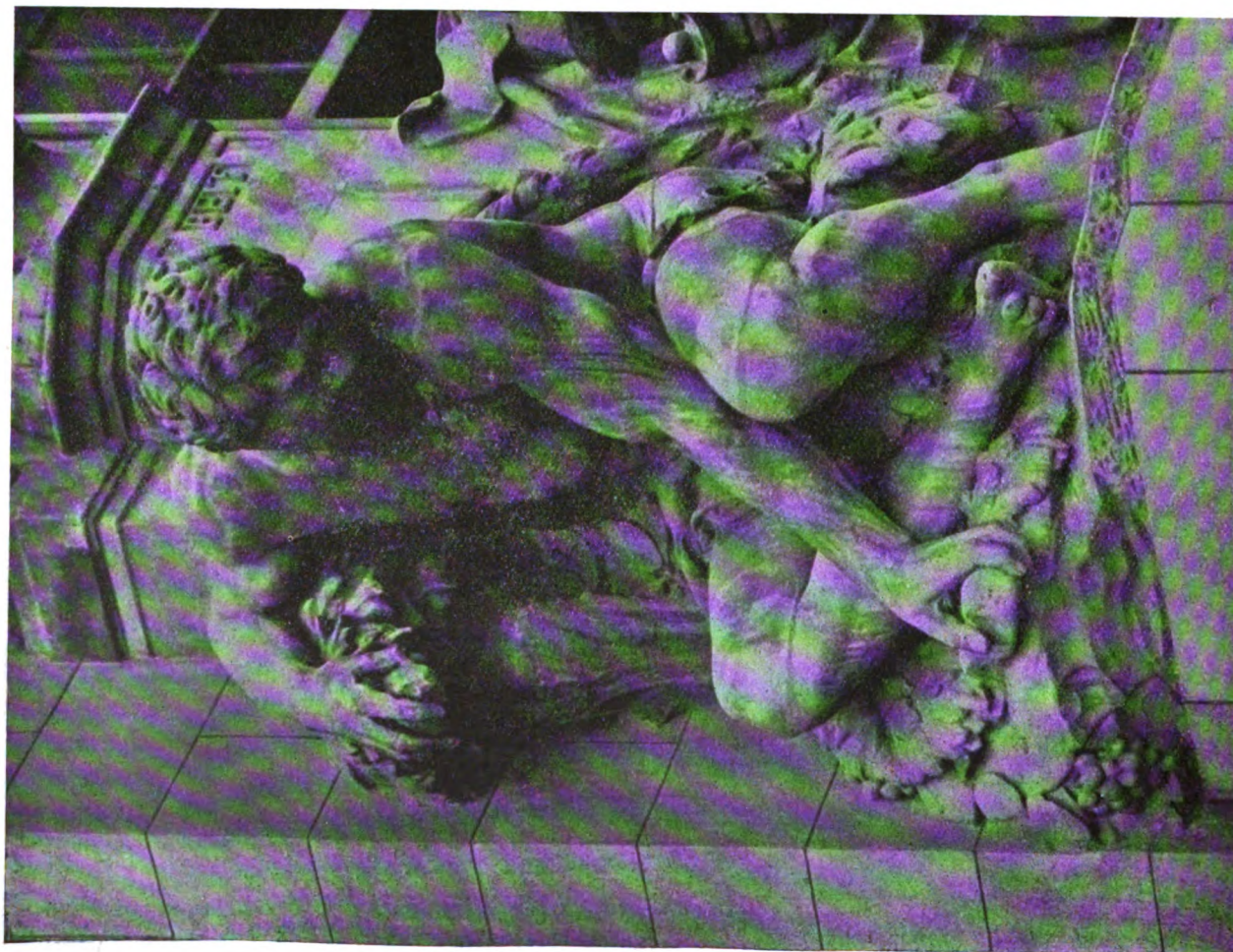
It is astounding how Britons tolerate the defacement of the finest sites in the centre of what they call "the hub of the Empire." As the artist Watts wrote:—"In our modern life the cultivation of the eye is sacrificed to all kinds of meaner considerations. Other organs of taste are respectfully treated. . . . But with regard to the eye we submit habitually to conditions which are equivalent to tearing raw meat with our fingers and teeth, living in the midst of vile odours, and complacently enduring abominable discords."

The Bush Co., Ltd., has undertaken to commence building on one wing of the island site in the Strand within a year and on the other within two years. The company having applied for a separate lease of the central block of buildings, the Improvements Committee of the London County Council has apportioned a ground rent of £13,000 in respect of the central block.

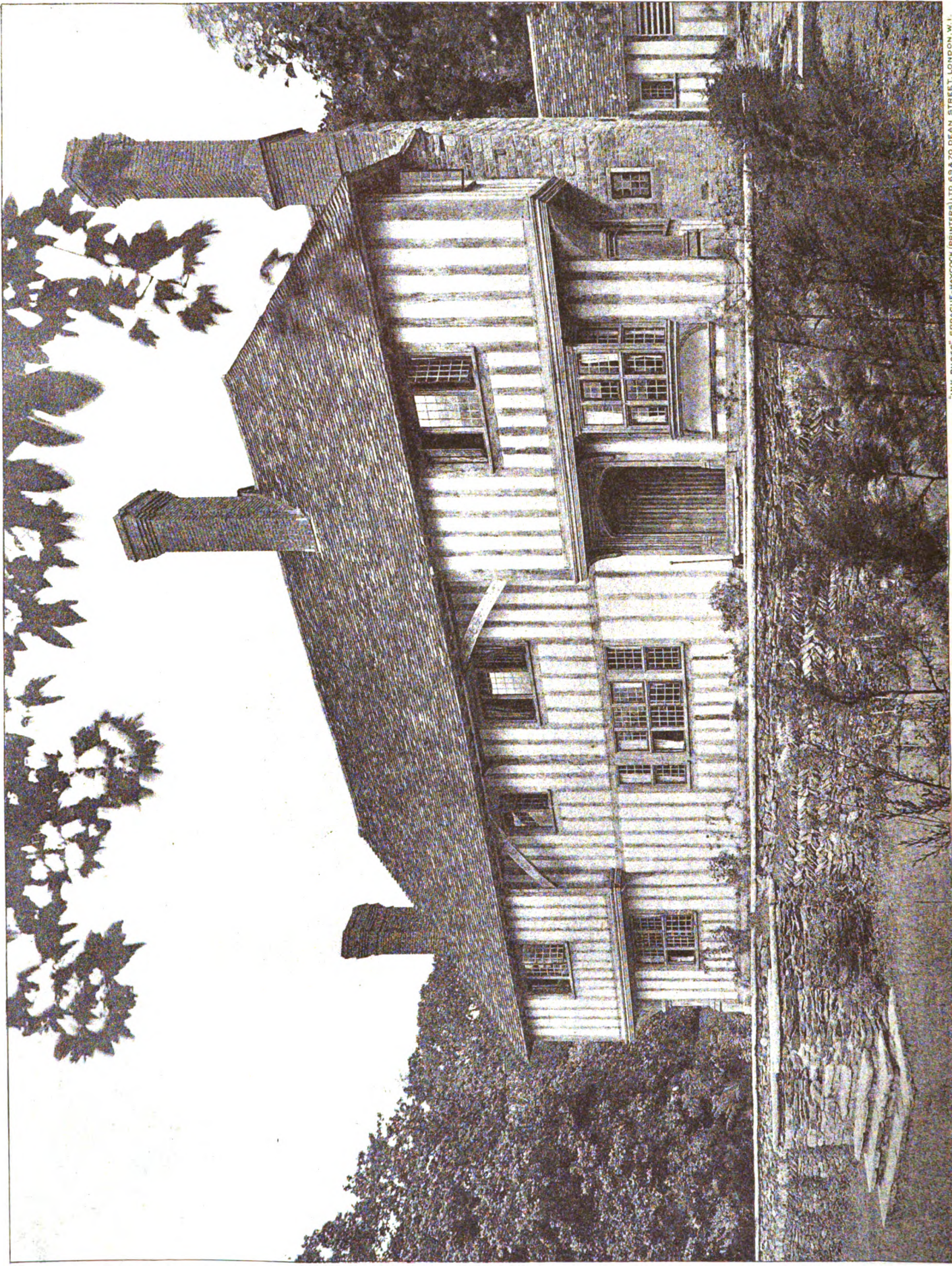


SHIPBUILDING. By R. PAUL MONTFORD. A group for the Kelvin Bridge, Glasgow.

From "Modern British Sculpture."

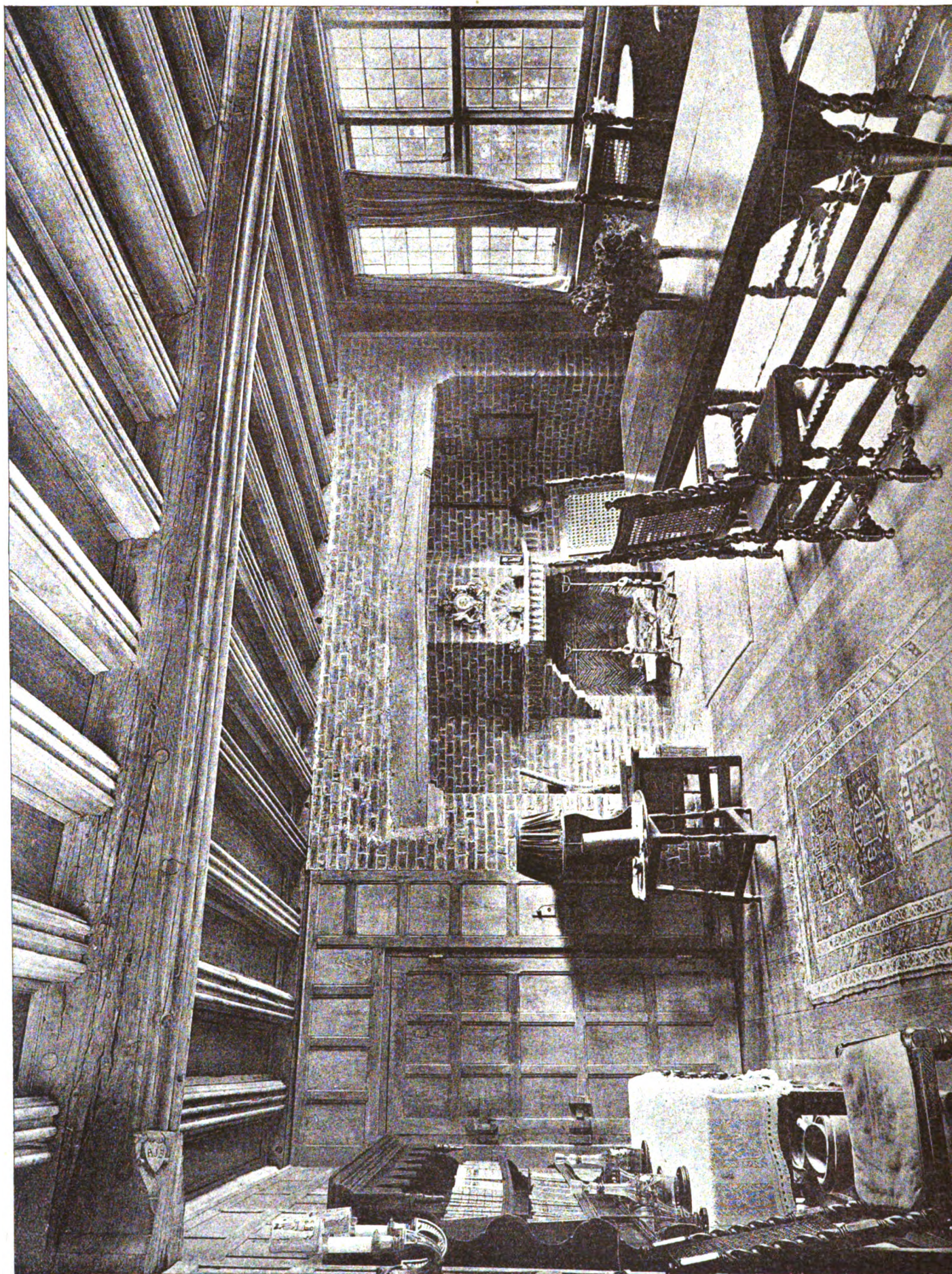


PALEOLITHIC MAN. By R. PAUL MONTFORD.



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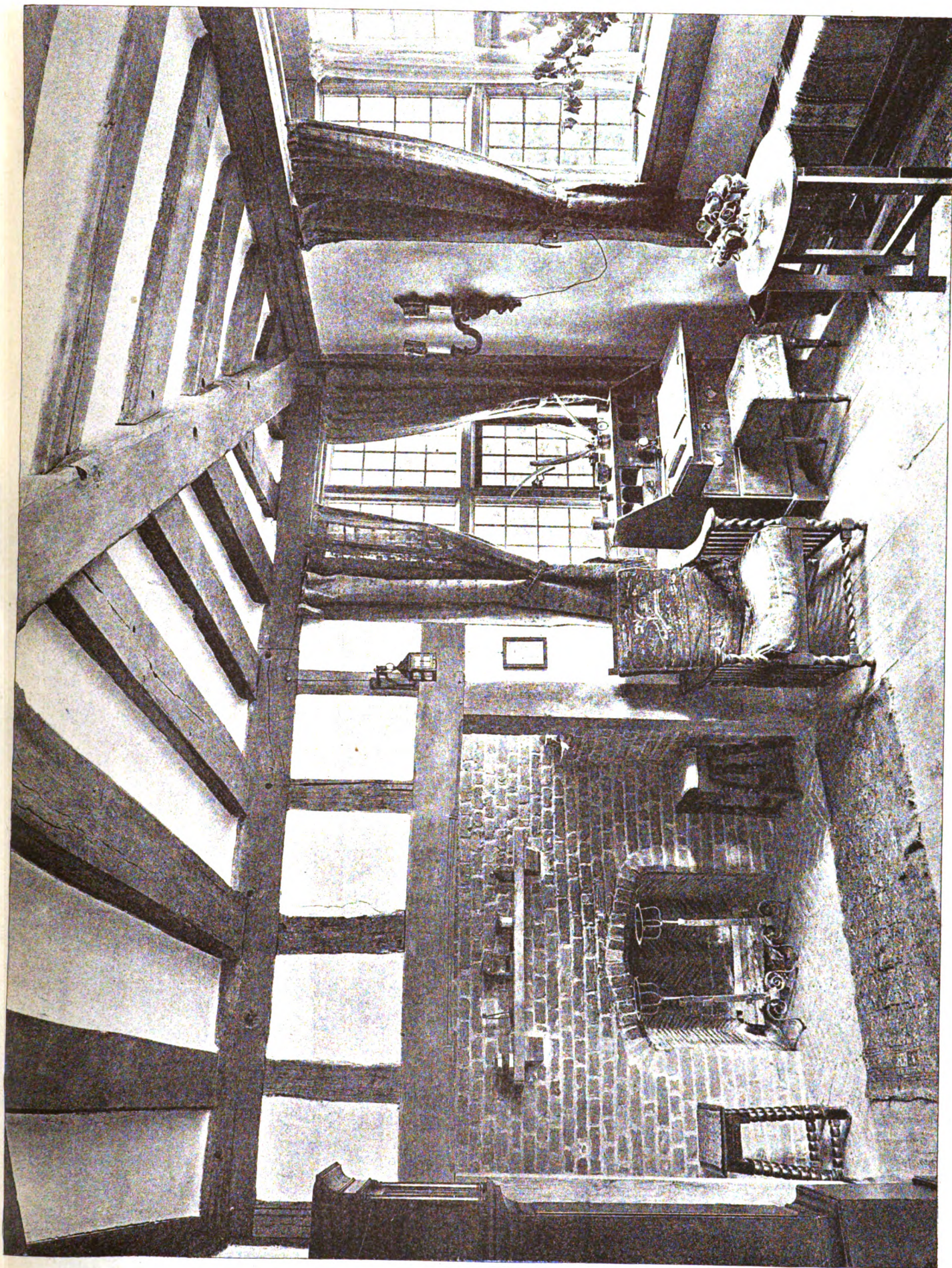
FRONT VIEW.
KILNQUAY, FLUSHING, FALMOUTH.
W. A. FORSYTH AND H. P. G. MAULE, ARCHITECTS.



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THE HALL.

KILNQVAY, FLUSHING, FALMOUTH.
W. A. FORSYTH AND H. P. G. MAULE, ARCHITECTS.

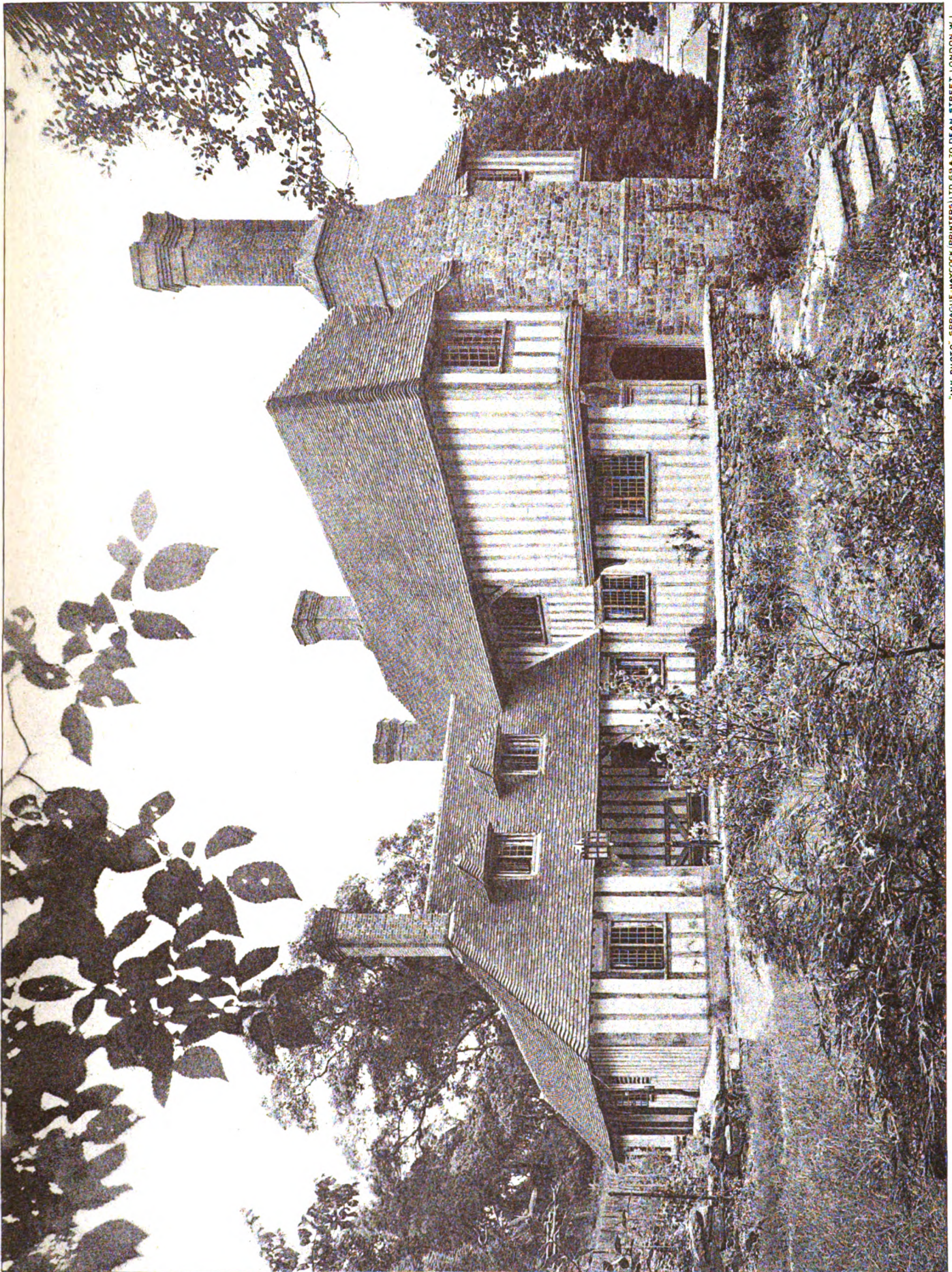


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THE SITTING ROOM.

KILNQUAY, FLUSHING, FALMOUTH.

W. A. FORSYTH AND H. P. G. MAULE, ARCHITECTS.



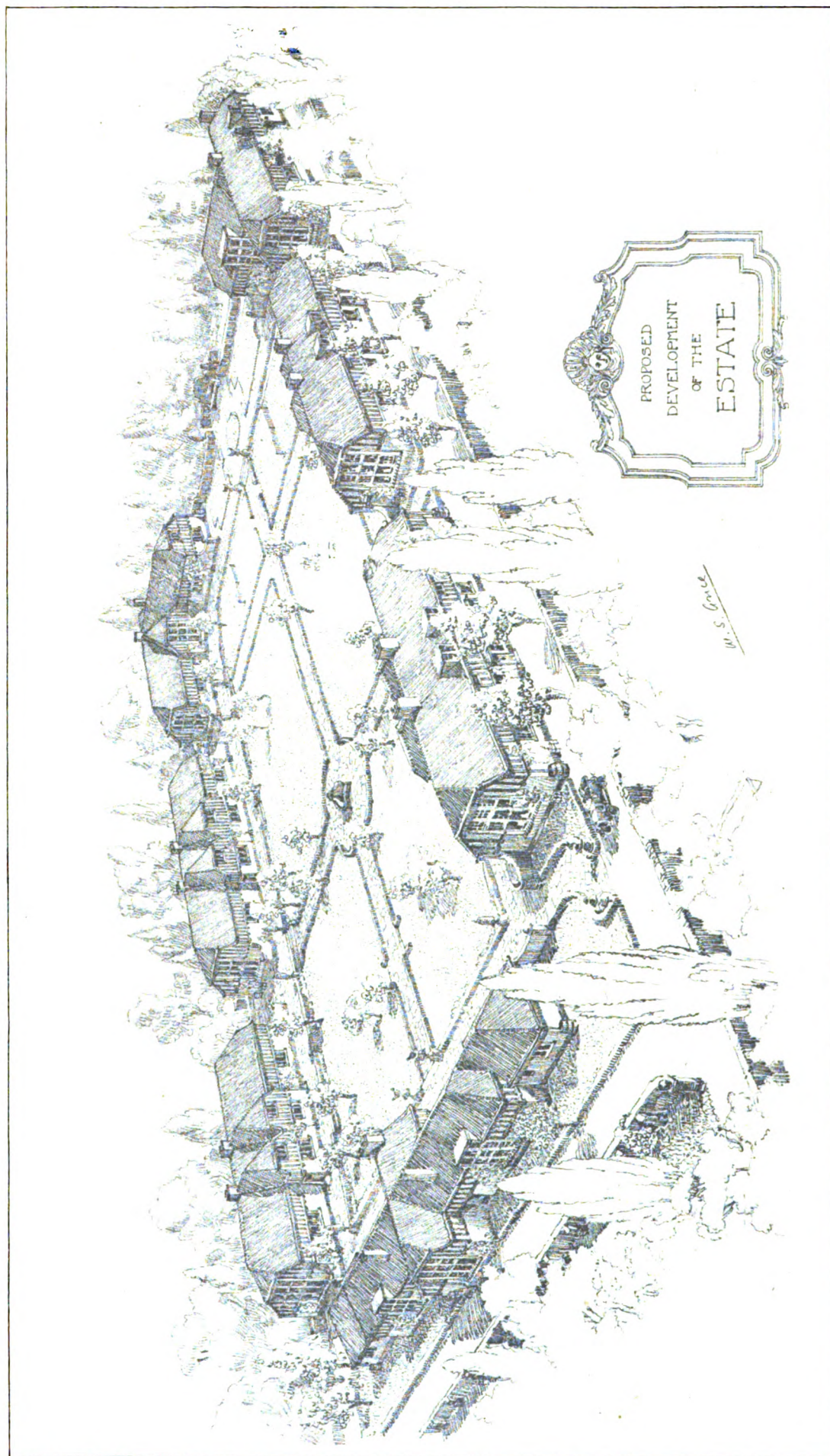
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GARDEN VIEW.

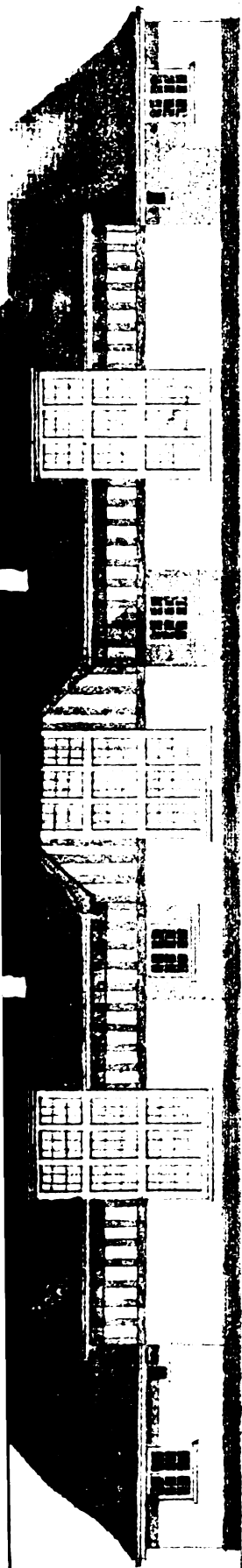
KILNQAY, FLUSHING, FALMOUTH.

W. A. FORSYTH AND H. P. G. MAULE, ARCHITECTS.

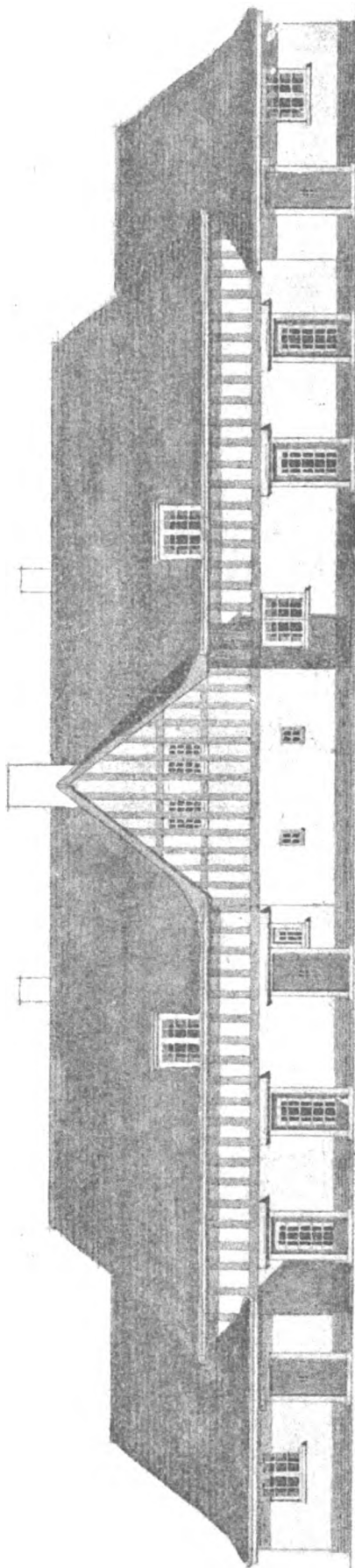
THE ARCHITECT, NOVEMBER 10th, 1922.



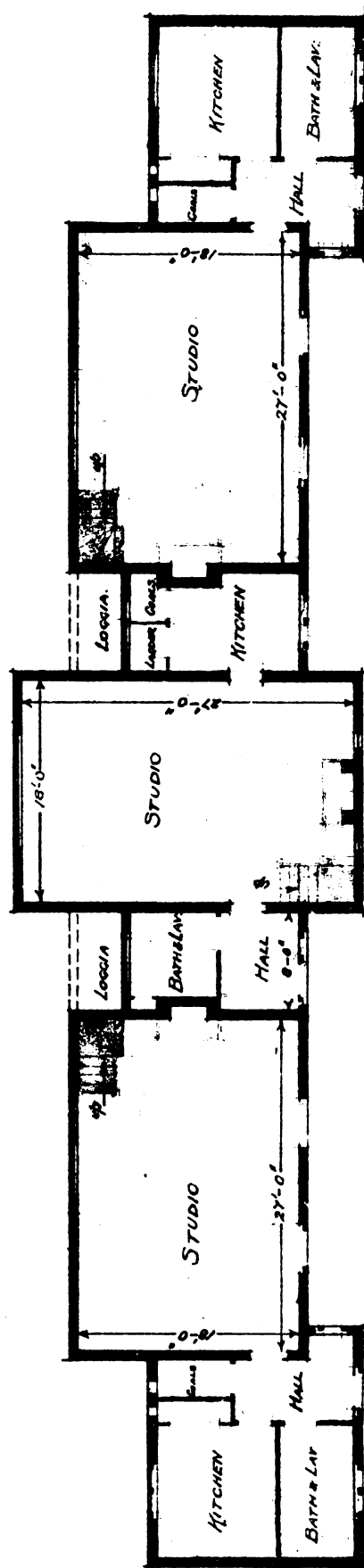
DESIGN-FOR-STUDIOS.



GARDEN ELEVATION.



FRONT ELEVATION.

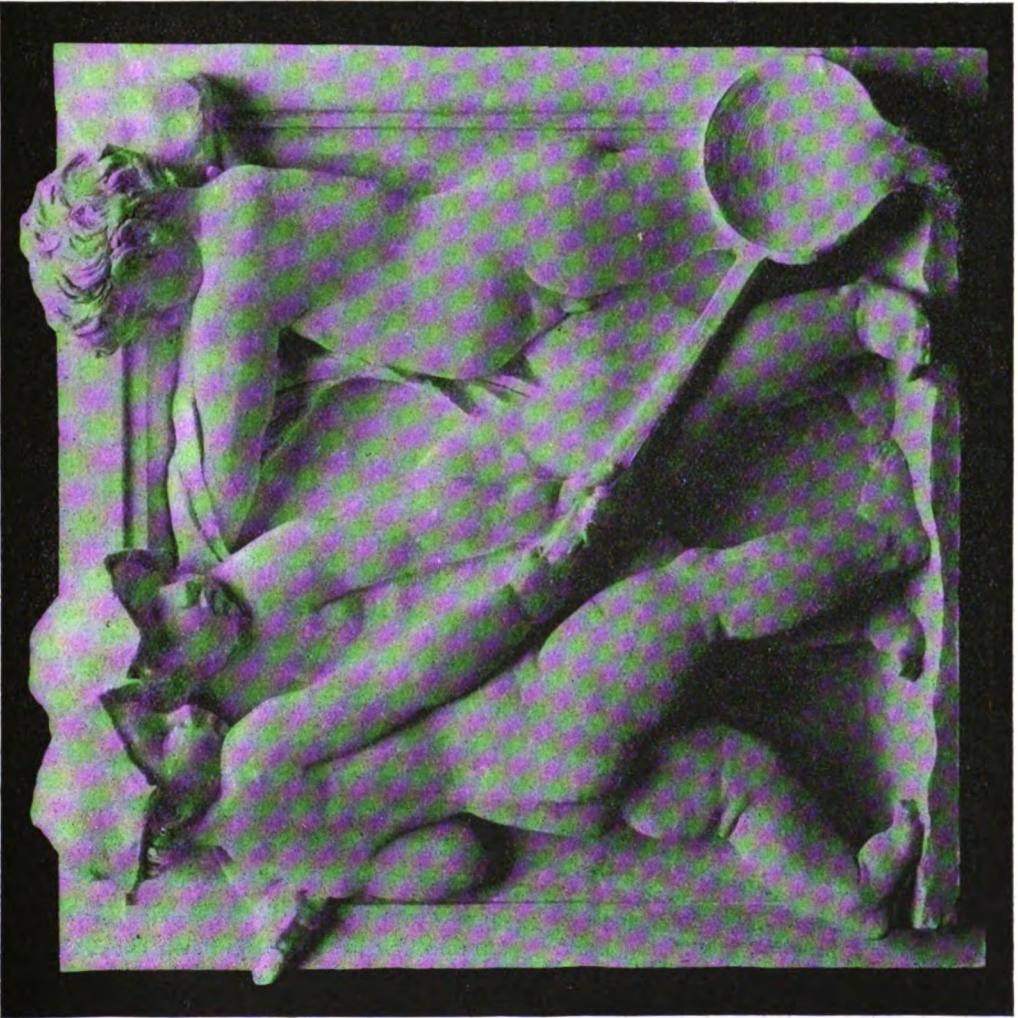


GROUND FLOOR PLAN.

W. S. GRICE, ARCHT.
ARCHT.
9 G. GRAYSON, ARCHT.
JUNE - 1922

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DESIGN FOR STUDIOS.
BY W. S. GRICE, ARCHT.



ARCHITECTURAL PANELS. By W. REID DICK. From "Modern British Sculpture."

R.I.B.A. Eighty-Ninth Session, 1922-1923.

Inaugural Address.

By the President, PAUL WATERHOUSE, M.A., delivered at the General Meeting, November 6, 1922.

The opening general meeting of the Session 1922-23 was held at 9 Conduit Street, W., on Monday, November 6. Mr. Paul Waterhouse, M.A., President, occupied the chair. The Secretary stated that the candidates nominated for election on December 4 were as follows: Fellows, 15; Associates, 141; Hon. Associates, 2; Hon. Corresponding Members, 9.

Mr. Paul Waterhouse then proceeded to give the following inaugural address, which he entitled

"SOME LONDON—AND OTHER—PROBLEMS."

It is customary to have a subject, but why it should be called a subject I do not know. If a subject is a thing or person in subjection, the word is inappropriate to the theme of an address. For, so far from being the obedient servant of the speaker, it is his tyrannous master, or if in any sense beneath his feet it is as a devil-possessed carpet beyond whose borders he dare not tread, and whose pattern is a kind of maze that regulates his dance.

So if to-night I seem more of a wanderer than the keeper of a beaten track, my excuse is that, relying on the derivation of the word subject, I mean to keep the thing in subjection.

London is ever with us. Architecture is ever with us. The two are but synonyms for mystery and charm, for doubt, hope, wonder and infinite consolation.

No traveller can help comparing his London with other capitals, and if, as is happily true, he always comes back to London to find a welcome and to realise fresh beauties, he none the less is aware that there are some things in which London falls short of the spirit, the habits, the ideals of other places.

Some while ago there was a debate as to what should be the motto of the London County Council armorial bearings. My own suggestion was "Keep off the Grass."

In suggesting it, I suggested no reflection on the County Council itself, but rather on a spirit which seems to threaten all those who find themselves in charge of our town. It is a spirit which, happily, is on the wane, and I believe that the County Council itself is contributory to its gradual extinction. I hardly know how to define it except by example and analogy. The simplest example is Paris. Paris, like us, has a river—a wilder, larger, less tameable river. But would anyone believe, who had not seen it, that in spite of embankments in solid masonry, higher and even more solid than our own, big trees of forest growth grow between the embankment and the river's edge?

Those who have seen these trees and that shore know also that men may, and do, go and fish on that river bank, and that the parapets of the embankment are beset—I might say decorated—by a mile of bookstalls.

Here are two things impossible in our London: the permission given to a great rural force to continue the force of its rural nature in the heart of town culture, and the permission given to the free-lances of an ancient trade to ply their business elsewhere than in orthodox shops.

I know all about the excellent reasons which govern our behaviour, and all the sensible arguments which can explain it. "The Thames banks are muddy, not shingly." "Access to the water leads to suicide and accidents." "Trees wouldn't grow by the water's edge." "Our river is tidal; theirs isn't." "Irregular trade once permitted would extend all over London." But all these arguments are not really to the point; the fact is (and we know it) that if we woke up one morning and found that the Thames had become the Seine, we should have those trees cut down, we should send those fishermen to the police court, we should close the access to the banks, and Parliament itself would legislate for the removal of those bookstalls. And why? Simply because the whole thing is too free and easy for our ideas of propriety.

The fact is, I suppose, that we have a kind of protestantism or puritanism in our ideas of town propriety, and we certainly cherish (avowedly or not) a sense that there is a normal kind of rigour which suits a town, out of which country (which is to us a sort of abnormality) must be excluded. That is why our suburbs are largely hideous.

Put it another way. Paris is a large—a very large—country town. London, however much you were to reduce its size, could never be a country town. It does not differ in degree, but in kind.

Richmond Park, barring a certain superfluity of railings, may be looked on as being almost a miracle. That anything so like untouched nature should exist so near London is almost scandalously delightful. It is, I suppose, about the limit. Imagine another night-time transformation: conceive Richmond Park taking the place of Hyde Park. What would happen

in the morning? I think it would be at once closed for necessary alterations.

Versailles is the same distance from Paris that Hounslow is from London. Drive from Versailles to the capital through St. Cloud, and you will not dare to tell me that the miles of unfenced woodland through which you pass would be permitted on the Hounslow Road.

There is undergrowth in the Bois de Boulogne, literally undergrowth. If it were to spring up in Regent's Park, what would happen? Miles of unclimbable iron hurdles, and a penny on the income tax to pay for them.

The man, if there is one, who has walked along the banks of the Regent's Canal from its harbour mouth to the Great Central goods station; the men who go into Neville Court trembling for fear lest the great and tender treasure there be gone; the few who have found the one only spot on the Middlesex side of the Thames where one can wet foot on the river's edge; these men will know what I mean by that little touch of unrestraint which, with the best intentions in the world, we smother.

If you have ever made a water-colour sketch of St. Mary's Church, hard by the apparently pre-historic dyke which is really the North sewer outfall; if you have ever gazed at the cattle on the Beckton Road flats; if you remember the Piranesi-like wonder of St. John's Square, Westminster, in the 'eighties, or have been unable to tear yourself from Clerkenwell Green, you will know what I mean but cannot express.

There are great times coming for the Surrey side. The County Council office—which I frankly admire—is a pledge of that. The planning of that shore territory has got to be dealt with by somebody, or by some "body," or by chance. May it come to pass that whether the task is intrusted wisely to an individual or expensively to fortune, the result may contain some elements of that freedom which is a joy to poets, and inspiration to artists, and an aid to life.

Region-planning makes one think of axes—not axes to grind, but axes of alignment. I suppose the most famous of axes is that which, starting from the statue of Lafayette, does an unbroken flight of two miles to the Arc de l'Etoile, which, though its visual existence ends there, starts afresh for a four-furlong run to the Porte Maillot, and having there reached the boundary of Paris, takes breath for another 2,000 yards along the Bois de Boulogne, and, to show that it is not exhausted, does a gratuitous rush of nearly a mile to a mound on the farther side of the Seine. We cannot do such things in London—perhaps we do not want to; but there is no reason why we should make such havoc as we do of some of our small opportunities. It is an ill business hunting for uglinesses in our dear London, so I will give only a hint or two. A pair of the best statues in London, that of the agricultural Duke of Bedford and the classic figure of Charles James Fox face one another at the distance of a street which is 250 yards in length. At or near Fox's effigy common necessity called for the existence of a lamp-post and a swan-necked stand-pipe for feeding water-carts. Mere stupidity would suggest that one or both of these blemishes should be placed on the axial line; rather less stupidity would have placed one horror clear of Fox to the right, the other to the left. Stupidity in *excelsis* would naturally rise to the idea of placing both so as to obscure the view of the toga-robed statesman, each within a foot or so of the axial line.

Shall I confess that it was stupidity in *excelsis* that won the day. It is rather pedantic to suggest that statues serve no purpose but to be seen. Nevertheless I do suggest it.

When the Guards' Memorial in St. James's Park was first proposed the scheme was let loose on the public by the means of an article in *The Times*, accompanied by a careful-looking plan. This plan clearly showed that the intended monument, which was of ridiculous lateral extent, was to be so placed that the view through the Horse Guards archway would permit the vision of one side of it only.

I wrote to *The Times*. The author of the illustrated article at once replied that it was a well-known fact that plans accompanying articles of this kind were not drawn to scale. I admired his powers of defence.

It is the judicious observance of axial lines that gives charm to neighbouring non-axial arrangements. An axis all but respected is of no more æsthetic value than a catch missed in the deep field.

A word of mine let fall just now about the County Council House set me thinking of acoustics, and I couple the two ideas without any but the most sympathetic thought for Mr. Ralph



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Knott. I would never blame any architect for an acoustic failure in this present year of grace, but I trust that in a year or two's time such failures will be deserving of blame. I am in hope that members of our Institute, in consultation with experts in sound law, will before long reach such an interchange of national experience as will elevate our present groping insecurity into the region of scientific certainty.

I once built a committee room which was to be a model of acoustic excellence. Into it I crammed every device known to the handbook of that age as leading to perfect sound conduction. What is more, I cut out of it every known cause of acoustic disturbance. The achievement was a triumph of failure. As cures curtains were only the slightest of alleviation, eight electric candelabra united by chains seemed, instead of baffling the sound waves, positively to vibrate to the voices of the outraged committee men. But peace came at last by the purchase of an 80-guinea carpet of thick pile. I know, probably you know, that a pulpy wall paper goes a long way to remedy the trouble, and I am myself experimenting—on a real building, worse luck—with a system of roughened surface.

But, after all, the best buildings for sound seem to be those in which echo is made our friend and not our foe, buildings in which, as in the old Exeter Hall, echo was timed to reinforce every syllable instead of fighting for dear life with the succeeding one or possibly with the next word.

I look forward greatly to more light on this ancient bogey.

It was amusing to note that the correspondence in *The Times* on this subject floated away from the topic of our acknowledged darkness not to light, but to the confused noise of scientists belabouring one another on the general nature of induction from observed phenomena.

During my past year of office the architectural waters of Edinburgh and London have been stirred to their depths by three commotions, one in the northern capital, two in the south. The Edinburgh storm was an affair of tramway wires. Those who have wandered about Edinburgh in early dawns will have regretted in recent years that the traffic-less quiet of the twilight was disturbed by a noise as of the clucking of innumerable hens. This was produced by the ceaseless toil of the underground cables chafing under enforced idleness and waiting for the far noisier burden of the tramcars.

Lured by the wish to be rid of this hindrance to poetic thought—or by other wishes—Edinburgh decided for the abolition of underground traction, and pending the invention of a “wireless” system the municipality found itself faced with the problem of wire suspension. I was asked to join a movement for protesting against the attachment of the wires—or rather of the wires that support the wires—to buildings, on the ground that the so-called “rosettes” or attachment blocks were outrages against architectural decency. The alternatives to rosettes are posts. Now, tramway posts are of two kinds. One sort, when disposed for duty, looks, unfortunately, like a random accumulation of sanitary vent pipes; the other sort is tainted with wrought iron of the kind which owes its prestige solely to the fact that in Victorian days there was a crusade—quite unmerited—against cast iron.

In order to make up my mind on this subject I adopted the line that a question of æsthetics can sometimes be as well decided by the eye as by the brain, so having heard that both rosettes and posts could be seen in full bloom at Leith, I went to Leith. There the question decided itself. I had to choose between yards of municipal “art” scroll-work and a small slab of practical metal. I chose the latter and had, I believe, all the best people in Edinburgh against me. I had never differed from a single Scotsman on any subject before.

London's two thrills have been the Bank of England and Higher Buildings. No one in this room needs any enlightenment upon the nature of these two problems. To take the Bank first. I may explain that it was solely as your President and as the assumed representative of a certain aggregate of cultivated—I didn't say cultured—opinion that my view on the subject was sought and published.

The facts as I see them are very simple, though the problem is very complex.

The Bank, a very beautiful and greatly beloved building, is too small—vastly too small—for the Bank's business.

The Bank's business is of admitted importance, it is, in fact, of such great and national importance that the business man's answer to the problem, viewed without relation to the pleasures and affections of the heart, would be, “Rebuild the whole thing from the ground—and, indeed, from far below the ground.”

But you cannot, in a decent country, view even money matters wholly apart from these “pleasures and affections.”

Next there come two very interesting factors in the case. The site of the Bank is so consecrated by sentiment, necessity, convenience and habit to the Bank's business that any idea of

abandoning the site and choosing a new centre is entirely out of the question. Moreover, were this course adopted we should have to face the further problem that the abandoned buildings would have to become one of three things: 1. The home of some tenant whose needs they would fit unaltered. 2. The home of a tenant who would alter them; or 3, a historic monument. The first is unlikely, the second would be disastrous, and the third is contrary to the spirit of architecture.

What I call the other factor in the case is brought about by the low height of the Bank buildings.

The raising of the walls on the frontages to anything approaching normal city height would lead to interference with the prescriptive rights enjoyed by ancient light owners in all the surrounding streets.

This apparent disability is really a help towards the harmonising of contending motives.

The Bank must increase in size, it must remain *in situ*, it must not violate its well-known architectural countenance, it cannot easily or reasonably heighten its exterior walls, but it can, and I should say must, build buildings of increased height inside the *enceinte* with which the genius of Soane engirdled it.

That there should be a necessity for altering any of the internal courts or any of the interior halls and rooms which are part of its beauty is indeed deplorable, but the deplores of such internal change are but a millionth part of those who would or should suffer by any destruction or mutilation of the exterior. The right rule appears to be that the whole of the engirdling wall should be left undisturbed, expressing in the future as it does express to-day the very spirit of protection or custody, and that if it is impossible to retain unchanged any of the open courts which are among the less known beauties of the interior there should at least be preserved as many as possible of the banking chambers which align the frontage to a depth of some forty feet, leaving the new higher buildings to rise at such a distance from the façades as to render them a kind of keep within the castle. For my own part I deprecate the superposing of any upper growths on the frontage walls themselves, feeling that what Soane designed as horizontal and self-sufficient should not be made a substructure to any upward composition, however ably designed.

And now, with your leave, a word on the Higher Buildings problem. The opinions even of individual architects differ on this subject, but this Institute as a general body spoke on the matter in terms which were as remarkable as they were unmistakable. Why remarkable? Because architecture is an art whose business it is to clothe utility in beauty. What does our motto say, utility for the citizens, beauty for the city? It is our business to balance the utility and the beauty lest either should overweight the scale. When a man is faced in these balancing exploits with a difficult decision, it not infrequently happens that a coin or two in one scale or the other will help the mind's decision. The Institute's mind must have been fully open to the fact that if it were to throw its influence into the Higher Buildings cause it would undoubtedly open the way to increased opportunities of earning money. In other words, every self-interested motive lay for architects on the side of Higher Buildings. Now the President is the one man in this Institute who doesn't normally vote, and he does as little as he can in the way of influencing others, so that perhaps he may, without indecency, say what he thinks about a vote taken in his presence; and I take this opportunity of saying (naturally without any reflection whatever on those who voted in the well-meaning minority) that the decision given by this body against the promotion of higher buildings in London was a remarkable and very high-minded example of truth to artistic purpose in face of very cogent and material counter arguments.

Do not let me be misunderstood. It was not a question of moral right and moral wrong with money on the Devil's side. It was a question of æsthetics in a very broad sense, and the side which was willing to sacrifice opportunity for an ideal won.

It is by virtue of my claim to speak without a fixed subject that I spring from Higher Buildings direct to the portrait of Mr. John William Simpson.

Our intention, in the series of portraits to which this painting will to-morrow belong—the series is already assuming the proportions of a respectable picture gallery—our intention, I repeat, is to acquire, often, I fear, at the cost of some generosity on the part of our good brothers the painters, a collection of first-rate works of art as first-rate memorials of architects who should be and may be first-rate. Happily it has been our good fortune up to the present moment to be able to offer as sitters to the portrait painter men whose achievements and fame have been worthy of his work. Our distinguished brother architect, Mr. Simpson, retaining during his years of presidency some traces of that modesty which it is the obvious duty of a president to set aside, may probably have been prone to decry his own claims. It is our pleasant duty this evening, in welcoming his portrait,



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to welcome him also to this familiar gathering and to assure him of our pleasure in taking possession of so good a representation of so good an architect and so good a president. Having regard to that modesty which since his departure from the chair he has been at liberty to resume I will be careful of what I say, but as Mr. Simpson's successor and as a member of his Council, I suppose I am as well qualified as anyone else to speak of the unceasing vigour of his work for the Institute. The Council can never have had a better chairman. His conduct of debate was always firm and fair, his treatment of difficulties always judicious. But these are merely domestic qualities. Mr. Simpson went much beyond them. His constructive policy, a rather rare thing in a President, was bent upon the improvement of the Institute's position, and we know with what enthusiasm and zeal he laboured in a line of action which many of us thought it dutiful to advance. Nay more. Mr. Simpson, before, during and since his presidency, has always had at heart the relationship which should exist between our English architects and those of friendly countries on the Continent. Equipped with special gifts of intercourse with France, we acknowledge him as the father of that Franco-British union which has already brought the priceless gift of friendship to many men on both sides of the Channel.

Again, we know and realise that during those years which seemed to be devoted almost exclusively to the affairs of our Society, Mr. Simpson was blessed and encumbered with the cares and pleasures of a large practice. How a man with the handicap of several months of ill-health was able physically to cope with so many duties all generously fulfilled is more than some of us can understand. But the task was accomplished, the health was happily restored, the rest—if the renewal of increased professional work can be called rest—was won, and if Mr. Simpson should prove to be the last to whom the honour of belonging to the present series of portraits is accorded, he will have the satisfaction of knowing that he has won his position on the line not merely by the great skill of the painter but by his own deserts. In thanking Sir Arthur Cope for the brilliant performance of his task, and it is my wish here and now to move a formal vote of thanks to him; we welcome the new possession as the presentment of one who, besides being a gifted and very productive architect, showed during his year of presidency, and, indeed, in many other years, a dutiful devotion to his Institute, and an initiative in that devotion, which have been the admiration of his friends, the despair of his rivals and the encouragement of his successor.

At the conclusion of Mr. Waterhouse's presidential address, the portrait of Mr. Simpson was unveiled.

Mr. John W. Simpson, Past President, in seconding the vote of thanks to Sir Arthur S. Cope, R.A., said he had been on terms of intimate friendship with that painter for more than forty years, and felt the greatest admiration both for the man and his achievements. The portrait was, in his opinion, a very beautiful example of Sir Arthur's work, and the Institute would be proud to hang it alongside those masterpieces of the other great painters which were already on their walls. The portrait was a striking example of the truth of the dictum that the value of a work of art depends not on the subject but on the treatment of it. The humble individual whose face he shaved every morning was very different to the dignified person looking out of the gilt frame. When he reflected upon the few little things he had been able to accomplish for the Institute, their value appeared much less than the value the President had generously placed upon them. To stand by and support the President was one of the finest traditions of the Royal Institute.

The vote of thanks was carried by acclamation.

Sir Frederic Kenyon, K.C.B., in proposing a vote of thanks to the President, alluded to himself as a member of that public which has to live in and look at the works which architects produce. One event to face within Mr. Waterhouse's term of office will be the Wren Bicentenary, and he would have to play a leading part.

Sir Francis Newbolt, K.C., seconded the vote of thanks, and made humorous reference to his first meeting at college with Mr. Waterhouse, when the latter gave a painfully candid opinion upon his prospects of becoming a rowing man.

The vote of thanks was replied to by Mr. Waterhouse, and the meeting terminated.

The Glasgow Corporation last week accepted the offer of Messrs. Melville, Dundas & Whitson for the construction of a ferro-concrete bridge over the Cart at Riverford Road. An offer by the same firm for the erection of a reinforced concrete bridge over the Monkland Canal at Cumbernauld Road is also recommended. The estimated cost of the latter bridge amounts to £46,555.

New Books.

"Modern British Sculpture." An Official Record of some of the works by members of the Royal Society of British Sculptors. Price 7s. 6d. nett. Published at Academy Architecture, 44 Doughty Street, London, W.C.

This work offers a collection of illustrations, in most cases very effectively reproduced, of works by members of the Royal Society of British Sculptors, which represents such an important part of the modern movement in plastic art in these islands. In an excellent "Foreword" to this volume, whose interest is, of course, mainly dependent on the illustrations, Mr. A. Lys Baldry discusses the present as well as to some extent the past position of the sculptor's art in this country; and alludes to the revival which took place under the influence of that fine artist Dalou as Master of the Modelling Classes at the National Art Training School at South Kensington, where too Lanteri's influence—though not mentioned here—was a feature which cannot be overlooked.

"It is now some forty years," writes Mr. Baldry, "since this quickening of British sculpture into vigorous and active life took place: so there has been time to measure its strength and to estimate the value of its results. . . . During these forty years our sculptors have been setting fashions instead of following them. . . . They have widened, too, very greatly the scope of their effort, recognising wisely the many decorative possibilities of sculpture, the value of its association with architecture, and the extent of the influence which it is capable of exercising in many of the crafts. Especially"—he adds—"have they raised their standard of technical practice and quality of executive accomplishment."

That much has been done in this way is evident, though it is as evident that much more remains to be done to place British sculpture in the position which it ought to hold. In this direction the proposed exhibition of decorative sculpture at Burlington House is a welcome sign of interest and support; and a work like the present is most useful. We welcome here especially the reproduction of architectural sculpture, such as the architectural panels of Mr. W. Reid Dick, and the architectural details from the work of Mr. F. W. Doyle-Jones. As a whole, the illustrations are admirably selected and well reproduced.

This volume forms a comprehensive survey of modern British sculptors. Among the members whose work is illustrated are the following: The late Sir Thomas Brock, K.C.B., R.A., P.P.R.B.S.; the late Robert W. Colton, R.A., P.P.R.B.S.; Alfred Drury, R.A., R.B.S.; F. W. Pomeroy, R.A., R.B.S.; Sir Hamo Thornycroft, R.A., R.B.S.; Sir Bertram Mackennal, M.V.O., A.R.A., R.B.S.; W. Reid Dick, A.R.A., R.B.S.; Charles L. Hartwell, A.R.A., R.B.S.; Henry Pool, A.R.A., R.B.S.; W. Reynolds-Stephens, P.R.B.S.; Nicholson S. Babb, R.B.S.; Thomas J. Clapperton, R.B.S.; B. Clemens, R.B.S.; Mewburn Crook, R.B.S.; Chas. L. Doman, R.B.S.; John Angel, R.B.S.; Frederick Hannon, R.B.S.; Alexander Fisher, R.B.S.; Richard R. Goulden, R.B.S.; Gilbert Bayes, R.B.S.; C. S. Jagger, R.B.S.; Gilbert Ledward, R.B.S.; A. C. Lucchesi, R.B.S.; R. Paul Montford, R.B.S., R.B.A.; Albert Toft, R.B.S.; Allan G. Wyon, R.B.S. S. B.

(See Illustrations on pp. 340, 341)

Exhibition of Architects' Working Drawings.

An exhibition arranged by the Board of Architectural Education of Architects' Working Drawings was opened in the Galleries of the Royal Institute of British Architects on Wednesday last and will close on Wednesday, November 22.

The Exhibition, which will be open between the hours of 10 a.m. and 8 p.m. daily (Saturdays, 10 a.m.—1 p.m.), includes drawings kindly lent by:—

Mr. A. J. Davis (F.) (Royal Automobile Club).

Mr. E. Guy Dawber, F.S.A. (F.) (Eyford Park, Gloucestershire).

Sir Robert Lorimer, A.R.A., R.S.A. (F.) (Chapel of the Knights of the Thistle).

Sir Edwin Lutyens, R.A. (F.) (Imperial Delhi; Hampstead Garden Suburb).

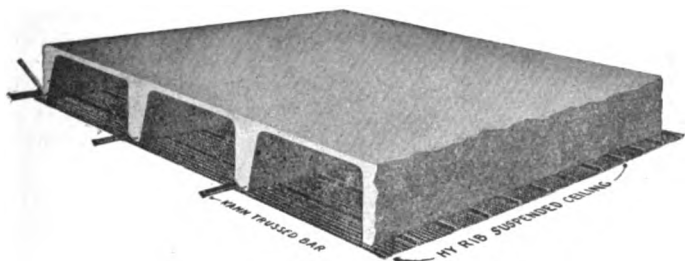
Mr. G. Gilbert Scott, R.A. (F.) (New Catholic Church, Northfleet; Memorial Chapel, Chester Cathedral).

The Exhibition is intended primarily for students of architecture; they will be able to examine the drawings that a practising architect hands to a contractor, and thus will be afforded an insight into the methods adopted in a modern architect's office.

A Special Students' Evening will be held at the Exhibition on Friday, November 17, 1922, at 8 p.m. All students are cordially invited to attend. The architects who have lent the exhibits—or their representatives—will be requested to be present in order to explain the drawings to students. Refreshments will be provided and no cards of admission are required.

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Housing in Medieval London

By Dr. Abram.

At the present time, when the Housing Question is causing so much thought and perplexity, some account of housing in medieval London may not be without interest, and fortunately much information on the subject can be found in manuscripts preserved at the Guildhall and elsewhere, and in records published by the Corporation of the City and by the Treasury.

Our earliest authority is a Building Assize issued in 1189, by the first Mayor of London, Henry Fitz-Ailwyn, and called by his name. It stated that in previous days most of the houses had been built of wood and thatched with straw or stubble, but that more recently many citizens had used stone and tiles in order to avert danger from fire, a wise change of which Fitz-Ailwyn and his advisers thoroughly approved. A good deal of contention had arisen regarding party walls, so precise rules were made as to the respective rights of neighbours, and it was decreed that, in future, if built of stone, they were to be 3 feet thick and 16 feet high. It was also ordered that the rain-water gutters which were laid along the top of them should be so placed that the water should run off either on to the ground belonging to the owner of the house or on to the high road. In addition the Assize made provisions to safeguard sanitation.

The building contracts of the period supply very instructive comments upon Fitz-Ailwyn's Assize. The specification for a house which Simon de Canterbury, carpenter, agreed to build for William de Hanigton, pelterer, shows us the planning of the dwelling of a well-to-do tradesman at the beginning of the fourteenth century. There were to be a hall, and a room with a chimney, and a larder between them on the ground floor, and a solar, or upper chamber, over the room and the larder. The hall, which was not an entrance hall, but the living room of the family, was to have an "oriole" (probably a recess with a bay window in it) at one end, and a step with an oriole (probably a porch) from the ground to the door outside it. Under the hall two enclosures were to be made for cellars, and another for a sewer, with two pipes leading to it. There was also to be a stable, 12 feet in width, between the hall and "the old kitchen"; above it a solar and a kitchen with a chimney, and above the solar a garret. A third oriole, 8 feet wide, perhaps a room with a bay-window, was to be placed between the hall and "the old chamber." The arrangement is somewhat curious, but apparently the builder was somewhat hampered by the remains of a former house on the same site; one of the most interesting points in the specification is the mention of chimneys, which we should hardly have expected at such an early date. On November 11, 1308, Simon came before the Mayor and Aldermen, and bound himself to make the house, at his own cost, down to the locks, and to finish it before the following Easter. William de Hanigton agreed to give him in payment £9 5s. 4d., fifty Eastern marten skins, fur for a woman's hood worth five shillings, and a fur for a robe for himself. Nine pounds sounds a trifling sum, but the value of money was very much greater in those days than it is now, so that it is really not a small amount. As an example of the difference in the standard of living in different classes, we may note that a hundred years later the Dean and Chapter of St. Paul's assigned £100 to Walter Cook, Canon and Stagiary of that church, wherewith to build himself a house on their ground in Knight-riding Street. The value of money was, however, considerably less in 1408 than in 1308. Nothing is said about the material of which William de Hanigton's house was made, but probably, as the builder was a carpenter, it was mainly of wood.

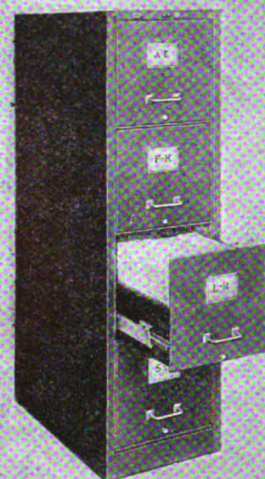
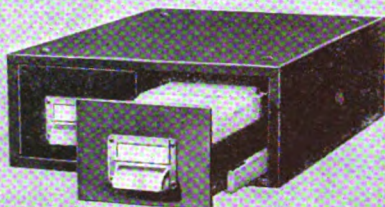
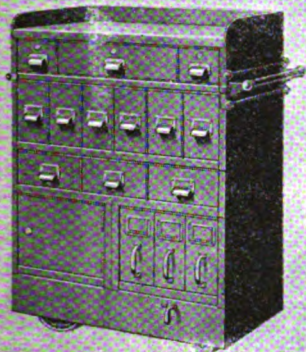
There is no ambiguity in the case of a tenement called "le Blake hors on the Hope," in Fleet Street, which the Dean and Chapter of St. Paul's demised to Hugh Hayward, for thirty years, in the nineteenth year of Richard II's reign. Hugh undertook to build a new chamber of new timber on the site of the old hall, and a good hall of timber, to mend three chambers with old and new timber, and to make a wooden wall between that house and the next one.

Some shops built in Friday Street, by John More, "tymberrmonger," and John Gerard, carpenter, were also presumably of wood, and some interesting measurements are given. Each building was to be two storeys high, with a cellar below it; the height from the ground to the joists of the first floor was to be 10½ feet; the puncheons of the first floor to the joists above were to measure 9 feet, and those of the second floor, 8 feet. Each shop was to have a gable towards the street on the east, according to a "patron" made on parchment. There were to be on the ground floor a stall for the display of goods, and an "entreclos," which we gather from another document was a kind of entrance hall, as it gave access to the rooms; on the first floor a hall in the medieval sense of the word, a larder, and a kitchen, and three other rooms on the second floor. This seems to have been a very usual arrangement of houses of this type; occasionally a parlour is also mentioned, and the necessary lavatory accommodation was, of course, provided. There were sometimes "appurtenances" in addition, which in one case included a stable, coal-house, and wood-house. It does not follow, however, that the whole house was occupied by one family; sometimes each storey was a distinct freehold. By the custom of London a widow had a right to the hall, principal chamber, and cellar of the house in which she had lived with her husband, and also the use of the kitchen, stable, privy, yard, and other necessities, as long as she refrained from re-marriage, and her privilege must have somewhat complicated tenure.

An agreement, dated 1369, between the Dean and Chapter of St. Paul's and two carpenters, Roger Fraunkelyn and John Page, regarding the erection of twenty shops, goes into minute details as to the materials to be used. A wicket-gate of old heart of oak was to be placed between two of the houses, the rest of the work was to be made of new timber of heart of oak. The carpenters were to provide planks of heart of oak, and to make the doors and windows of tables of "estland." Estland was the name at first given to boards brought from Norway and Sweden, but afterwards it was applied to any imported wood. All the plates in the front were to measure 7 inches in thickness, and 12 in breadth, and those behind 6 inches in thickness, and 12 in breadth. The principal puncheons of the first floor were to be 12 inches in breadth, and 9 in thickness. The first beam was to be 9 inches in thickness, and 13 in breadth, and the monials in the middles of the windows 6 inches in thickness, and 9 in breadth to fit the thickness of the beam. The joists of the first floors were each to be 10 inches in breadth, and 8 in thickness. The second beam was to be 12 inches in breadth, and 8 in thickness, and the joists on it 9 inches in breadth, and 7 in thickness. The principal posts of the building were to be 14 inches in breadth and 12 in thickness near the ground, and 12 inches in breadth and 10 in thickness at the top. All the rafters were to be 6 inches in breadth and 5 inches in thickness at the foot, and 5 inches in breadth and 4 in thickness at the top. The "lyernes" were to be 6 inches in thickness and 8 in breadth. The work was to be completed in two years from the following Michaelmas, and £303 were to be paid to the carpenters, in detachments.

The picturesque gables of medieval houses were as a rule made of a framework of timber, filled in with a mixture of mud and straw, very like the Devonshire cob of the present day; this part of the work was done by daubers. Plaster was also used both for the inside and outside of houses—in 1317, Adam le Plasterer made an agreement to plaster the hall of John de Bretagne, Earl of Richmond. He bound himself to find the plaster of Paris, to plaster and complete the hall, and to repair the walls and the louvres, both within and without, with plaster. The Earl paid £24 in advance, and Adam pledged all his goods, houses, and tenements in the City of London, for the due performance of the work.

The examples we have quoted make it clear that there was a considerable number of timber or half-timber houses



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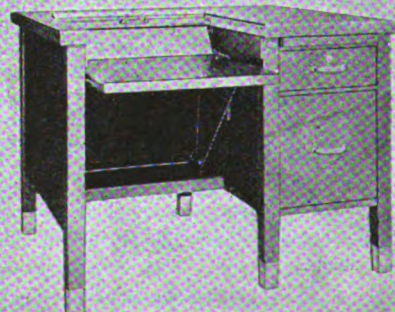
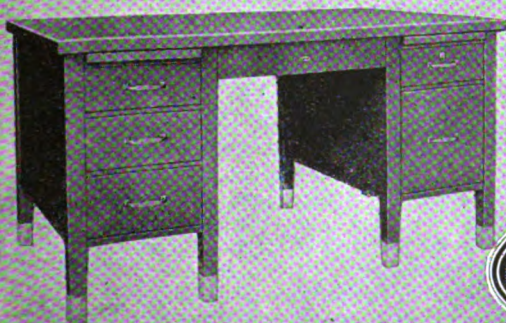
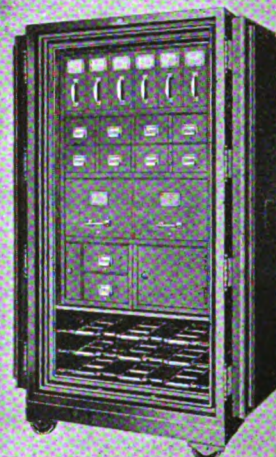
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in London throughout the medieval period, but stone houses are also mentioned in documents. One belonging to William de Viteri, in the reign of Henry III, was situated near St. Bartholomew's Hospital; there was another in St. Paul's churchyard, and a third outside the churchyard, for which fifteen shillings a year were paid. Others are amongst the bequests made by Londoners, in the wills so admirably calendared by Dr. Sharp.

The customs of London governing the relations of landlords and tenants are very interesting—a tenant could be required to remove anything he had built on to the property if the owner did not wish to buy it at the end of his term; windows, doors, lattices, and locks were usually regarded as the tenants' fixtures, and he could take them away if he chose. If goods of the tenant were seized for debt, and his rent had not been paid, the landlord had the first claim, but he could not obtain more than two years' arrears. If a tenant wished to be quit of property he had hired, he was obliged to give a quarter's notice if the rent were not more than forty shillings a year, and six months' notice if the rent were above that amount. The same rule applied to the notice given by the landlord, but if the tenant had specialty by deed for the term of his life, he could not be ejected even if the landlord alienated the property, a provision which makes us feel that after all it is not such a far cry from the twentieth century to the Middle Ages.

Birmingham University Town Planning Lectures.

Mr. William Haywood delivered one of the lectures of his Town Planning Series at Birmingham University, in which he dealt with Medieval Cities.

No definite town forms were produced between A.D. 500 and 1000. In the eleventh century, however, strong rulers began to re-establish here and there conditions favourable to a collective form of life, and the fortress towns of the Teutonic conquests in Poland and Prussia, with those of England after the Norman Conquest, are the first indications of a new progress which culminated in the thirteenth century, the golden age of Medieval Town Planning.

From A.D. 1209 onwards, the Papal crusade against the Albigensians led to the founding of many towns in the South of France. These towns, or Bastides, were built by the invaders not only for military security, but also as economic rivals to the older and still wealthy cities of the heretics, and settlers were attracted to them by liberal concessions of land, with the object of diverting vitality and commerce from a still hostile people.

As the political situation changed, many of these cities disappeared, but some still remain, usually where natural advantages in situation have satisfied more permanent needs. Thus Libourne, founded by Edward I. at the confluence of two navigable rivers, is now a *chef lieu d'arrondissement* with 10,000 inhabitants, and Aigues Mortes, designed by Louis IX. to become a great Mediterranean port, remains a walled city of 4,000 people.

In England, Liverpool and Hull were founded by Edward I. on sites so well chosen that both cities have become great. Conway, Carnarvon, and Flint, Bastide in origin, have been kept alive because their situation favoured peaceful pursuits when their political function lapsed.

The chief and constant factor in the arrangement of towns founded for political purposes by military powers, whether in the Macedonian and Roman colonies, or after the conquests of the eleventh and twelfth centuries in Europe, is the chessboard type of street plan. This arrangement is evidently the first to present itself to an orderly mind when about to plan a town *ab initio*, but it is important to remember that planning of this type, while in some respects an improvement on natural evolution, is merely the readiest way of solving an immediate problem, whereas the medieval town of natural growth, to the arrangement of which less thought may appear to have been given, was often adapted to local topographical conditions and to certain essentials of comfort and amenity which experience had shown to be desirable.

The Middlesbrough Education Committee have appointed a deputation to visit technical colleges in various parts of the country with a view to obtaining information useful for the proposed Constantine Technical College for which a local resident has offered £40,000.

Correspondence.

Bicentenary of the Death of Sir Christopher Wren, February 25, 1923

SIR,—The first meeting of the Grand Committee will be held on Wednesday, November 22, at 4.30 p.m., at the Royal Institute of British Architects, 9 Conduit Street, W.1. The business of the meeting will be to consider arrangements for the Commemoration Programme. The Grand Committee includes Sir Aston Webb, P.R.A., Mr. Paul Waterhouse, P.R.I.B.A., Mr. Andrew T. Taylor, Sir Lionel Earle, Sir Banister Fletcher, Sir Hercules Read, Professor A. R. Hinks, Mr. Mervyn Macartney, Dr. H. H. Turner, Major-General W. D. Bird, and representatives of the Universities of Oxford, Cambridge and London, of the City of London, and of all the appropriate Learned Societies, Guilds and Schools.

Tea will be served in the Common Room of the Royal Institute at 4 o'clock.

Yours, &c.,

IAN MACALISTER,

Secretary.

Royal Institute of British Architects,
9 Conduit Street, Hanover Square,
London, W.1.

November 7, 1922.

Trade Notes.

The Corporation of Scarborough have placed an order with the Walker-Weston Co., Ltd., for reinforcing foundation at Huntriss Row, Scarborough, with the Walker-Weston inter-locked double layer reinforcement. The thickness of concrete will be 8 in. and the surface is wood paving.

We are informed that a new company to be known as Bell's Poilite and Everite Company, Limited, has been formed for the purpose of combining the "Poilite" section of Bell's United Asbestos Co., Ltd., of Southwark Street, S.E.1, with the British Everite and Asbestilite Works, Ltd., of Manchester. The combined business will be under the same management as heretofore, with the first-named company holding a controlling interest. By standardizing their well-known manufactures the new company will be able to effect deliveries from the factory nearest to customers, thereby saving transport charges, giving a more efficient service, and, through co-ordination of effort, effecting further improvements and economies in production.

It is interesting to note some of the more recent contracts completed and in progress by Messrs. Frederick Sage & Co., Ltd., some of them especially being landmarks in the reconstruction of London and provincial shopping centres. Those completed include Dickins & Jones, Regent Street, W.; Galleries Lafayette, Regent Street, W. (this contract, including the entire erection of a new building, fronts, interior fittings and decorations, electric lighting, lifts and telephone system was completed and opened within seven months); Grande Maison de Blanc, New Bond Street, W.; Isaac Walton, Ltd., Newcastle-upon-Tyne; Trevors, Walker & Ling, and Lance & Lance, Ltd., at Weston-super-Mare; Hamley's, Regent Street, W.; Heap & Sons, Bury, and numerous others; whilst of those still in progress may be mentioned Peter Robinson's, Ltd., Oxford Street, W.; Greensmith's, Ltd., Leeds; Henry's, Ltd., Manchester; Fearis, Hereford; Pettigrew and Stephens, Glasgow; Worth of Paris, Hanover Square, W.; Joseph Johnson & Co., Ltd., Leicester; Boots, Ltd., Southampton Row, London; W. H. Smith and Son, Putney. It is worthy of comment that although Messrs. Sage are so thoroughly well equipped to tackle colossal undertakings, such as Peter Robinson's and Dickins and Jones, yet many quite small but enterprising provincial traders find it to their advantage to employ this front-rank firm.

At a conference of manufacturers of anti-corrosive products in London last week, it was decided to form an association to develop and extend the uses of rust-proofing materials and preservatives for stone and timber. Rust, said Mr. W. R. Douglas Shaw, organising secretary of the association, was the main enemy they were out to fight, but the term anti-corrosive was sufficiently elastic to embrace the preservation of timber, all users of which were subject to heavy losses by decay caused by the attack of a wood-destroying fungus. The corrosion and decay of stone, the scaling of boilers, and the fouling of ships' hulls also came within the province of the association. There were unusual possibilities for the use of non-corrodible metals in the laundry industry, which was now a very important one. Iron rust was a continual nuisance in many laundries. The building trade would be very busy for the next five years, and would be in the market for large quantities of anti-corrosive products.

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The Want of the Age.

Many of our present difficulties seem to be the outcome of a more or less complete divorce between profession and practice. Our methods of imperial and local self-government, our municipal institutions, our societies for effecting various ends, are all based on the supposition that people have common aims and ideals, a close community of purpose, and ambitions directed towards the same ends.

If such were indeed the case, there would be no necessity for Sir Aston Webb to present his picture of "London of the Future" in the guise of a dream, for there is little in the admirable sketch he gave which could not be put into practice with a little delay and at by no means excessive expense. There is no necessity for great interference with vested interests; for if those who represented such interests were inspired with the wish to act in the interests of their neighbours as well as their own, they would realise that the two aims are quite compatible with one another. To adopt broad instead of narrow views does not mean a loss of anything save prejudice, but it would seem that man to-day is as much afraid of his neighbour as he was centuries ago, though his fear may be shown in other ways.

We may safely cross Hounslow Heath, but we can be as neatly and completely stripped on the floor of the Exchange as we might have been in the past by a highwayman. A man's house needs no external defence, yet it may shelter those who are as completely antisocial as any robber baron of the past.

We give lip service to popular ideals of democratic principles, and yet pursue our carefully isolated individual ambitions, expressing vague surprise when the democratic machine does not produce satisfactory results.

We sometimes wonder if more would not be achieved were we more honest with ourselves, and whether the assertions we make would not carry more weight were we more sparing in our words. If in this twentieth century we are still primitive fighting animals like our forefathers, using different weapons but actuated by similar ideals, would it not be better to simplify rather than complicate our administrative machinery?

We must remember that as things are it is unlikely that the best intelligence of the community is placed at the nation's service, for a large proportion of those who devote themselves to public affairs do so because they cannot utilise them to advantage in a private capacity. Consequently the machinery of administration is frequently in second-class hands, with results familiar to us in our daily experience. These seem to be the forces against which reform strives in vain, as we see in the world of architecture and other walks of life.

The points made by Sir Aston Webb in his very able survey may be divided into three categories—firstly, those like the elimination of the smoke nuisance and the excellent suggestion that our park railings should be set back in order that adjoining thoroughfares should be edged with turf and trees. A second

category would include the gradual formation of the great new thoroughfares alluded to, which, if wisely handled and gradually carried out, would probably pay for themselves and in the end provide a profit. The third division includes that much-needed reform, the remodelling of the London railway system to meet the needs of a greater London than was ever contemplated when the railways were first constructed. This is the most difficult and thorny question of those alluded to, since it is necessary to persuade great companies protected by legislation that they may do better for themselves and the public if they abandon a narrow outlook for a much broader one. Here the position is also complicated by the fact that unfair attacks have been made on great private interests, and it needs skill, tact and diplomacy to convince the railway companies that all that is wanted is fair and impartial consideration without prejudice or animosity.

Granted that national and municipal expenditure on a large scale will be for years difficult, and perhaps impossible, there seems to us nothing which should hinder the laying down of a programme which, step by step, as time permits, could be carried out over a term of years. The real obstacle is, we are afraid, that we are governed municipally by too many authorities, and that these are largely composed of men elected not because of their fitness for office, but their desire to gain the *kudos* which public life carries with it. Coupled with this we have an electorate a large proportion of which never exercise the franchise they possess unless the immediate pressure of rates or some local question stirs them out of their profound apathy and indifference. The average citizen is protected from personal danger and his property is more or less secure, and this being so he often takes less interest in public matters than his ancestors did in ruder days when it needed personal initiative to secure what we now possess.

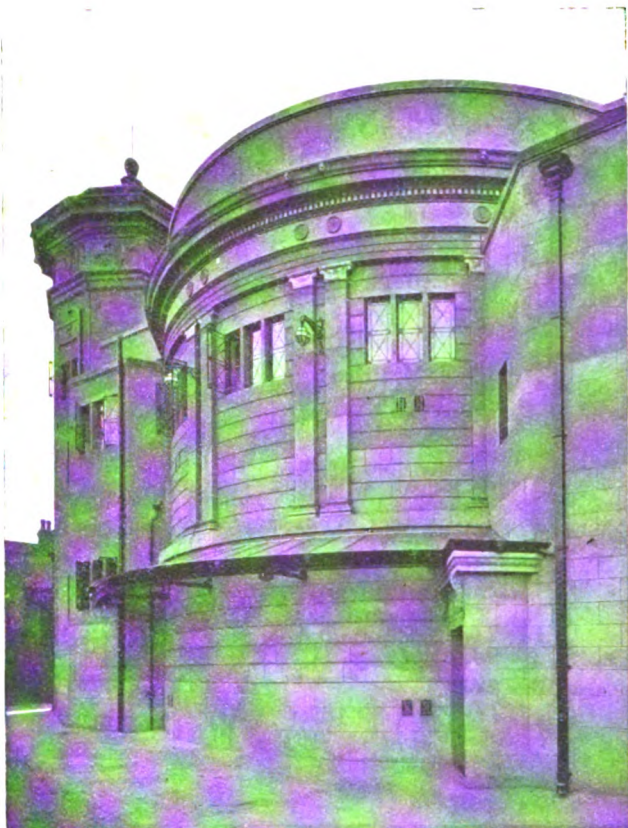
The greatest of London reforms since the time of the Roman domination was probably brought about by the accident of the Great Fire of 1666, yet not even when the city was a smoking mass of ruins was it possible to carry out more than minor improvements because of private prejudices, and it is doubtful whether, if a similar calamity occurred to-day, we should prove wiser in our generation than our ancestors were in theirs.

Meanwhile it is pleasant and useful to hear Sir Aston Webb's views, for his vision conceals the rough sketch of a carefully considered scheme every item of which is well worthy of consideration, and might be adopted as a general basis for practical endeavour.

It would be a great step in advance if the London Society could induce the London County Council to adopt a general scheme for the future development of London as a part of its programme, for the L.C.C. have created a record which is second to none among our municipal bodies, and whether governed by Moderates or Progressives, has usually shown itself both far seeing and liberal in its outlook on the problems of the greatest city in the world.

Our Illustrations.

VICTORY CINEMA, LOUGHBOROUGH:—ALBERT E. BULLOCK & JEEVES, Architects.



Victory Cinema, Loughborough.

This cinema is situated near the junction of Church Gate and Biggin Street, and is owned by the proprietors of the Empire Cinema in the Market Place.

Owing to the small area of the site and the necessity of setting the building back to increase the width of the adjoining roads, the building was designed on an approximately square plan, and accommodates about 1,100 people.

The general principles of construction, especially as regards the gallery, are those of a theatre, and the style of the decoration is as nearly pure Greek as is practicable with the limitations necessitated by modern planning.

The position of the site is somewhat secluded, being behind some buildings which face the wide Market Place, therefore it was found desirable to erect a tower at the angle to form a salient feature of attraction to the public.

The entrance to the cinema is by means of three pairs of bronze-glazed doors set in mahogany frames, giving access to the crush hall. The columns at the entrance are in cement, with Greek Ionic capitals and bases. They are painted black, as regards the shafts, and have gilt vertical beadings. The capitals are painted a cream colour, having the scrolls of the volutes gilt.

The floor of the crush hall is tiled with pale green, blue and white tiles of a square pattern having a geometrical border.

On either side the gallery is approached by means of French staircases executed in patent stone. The balustrading is made of a Greek pattern in cast iron, painted black and gilt, with a mahogany rail.

The auditorium is formed in two slopes towards the screen, whilst the orchestra is sunk about 2 ft. 6 in., and has, in addition, a panelled screen hiding the performers from view.

The exits on this floor are six in number, and on the gallery there are four such doorways.

Special arrangements were made to bring into use the most up-to-date services in respect of electric supply—vacuum cleaning plant and general lighting. The power is obtained by means of a National Gas Engine with a dynamo, both of which are placed in the engine-room, situated behind the screen, having therefrom a cable connected to the operator's box, and the various lighting services.

In addition, an accumulator room has been built to maintain a large proportion of the lighting for purposes of general use.

The principal lighting is chiefly of a concealed nature, the main cornice projecting a sufficient distance to allow lighting to be placed behind the mouldings to reflect up and from the continuous cove forming part of the ceiling. The other lights are pendants specially designed with Greek honeysuckle motifs.

The heating is by means of radiators and certain pipes fitted behind the stepping of the gallery to give an even distribution of warmth throughout the building; the ventilating installation is divided into two parts, of which the principal duct and fan are situated in the main roof, taking the vitiated air from the four ventilators formed in the general design of the oval ceiling band. The second extract is placed under the gallery, and connects two pierced ventilators dealing with the rear portion of the auditorium. In the first instance the fan is 42 in. in diameter, and in the second 36 in.

The operating box is fitted with two Kalee-Indomitable machines, having a throw of 72 ft. to the screen, which is placed beneath a three-centred proscenium arch, having on either side singing galleries, approached from the half-landing of the back staircases.

The general construction of the building is of brick rendered in cement and lined with stone jointing, the whole of the roof being supported by means of girders resting upon four principal stanchions cased by means of the plaster Ionic fluted capitals shown in the interior photographs.

At the rear of the gallery there are seven boxes, approached from the foyer or reception-room situated immediately over the crush hall.

The additional accommodation consists of a large room in the basement for the storage of furniture and similar purposes; a manager's room, boardroom and ladies' and gentlemen's lavatories.

The front pay-box entrance and exit doors are executed in polished mahogany. The whole of the interior plaster work is



fibrous, except the portion below the dado-rail, which is in hardened plaster and Keene's cement. The exterior ornamental work is executed in cement, which was modelled in London and sent to Loughborough.

The general scheme of colour decoration is pale green and cerulean blue-green for the proscenium panels to the ceiling. The principal high lights are picked out with gold. The main entablature is treated in a similar manner, while the proscenium arch is green, deep blue and gold, which principle is adopted for the remaining portion of the walls to the gallery.

In the auditorium the walls are treated with a lighter green, pale blue and gold, to counteract the effect of the more prominent darkness cast by the suspended gallery. The main pilasters are painted a cream colour to imitate as far as possible Carrara marble, and the capitals are treated with gilding in a similar manner to those in the front entrance. The panels to the foyer are picked out with black and gold upon a pale apple-green, having a cream centre panel in each case, and the doors leading

to the verandah are executed in metal in deal frames and stained and polished mahogany.

The gallery walls contain three-light windows to allow the daylight to enter when performances are not being held; and each is fitted with a revolving shutter, to enable it to be darkened during performances.

The construction generally is fireproof, and there is little wood used, beyond door casings; in addition, hydrants are placed in convenient positions, with the usual fire appliances to supplement their use.

The whole building has been designed and carried out under the supervision of the architects, Messrs. Albert E. Bullock & Jeeves, of 141 New Bond Street, London, W.1, for the owners, Messrs. The Universal Car Co., Ltd., Leicester; the contractors being Messrs. William Moss & Sons, Ltd., of Loughborough. The sub-contractors are as follows: For constructional steel work, Messrs. W. Richards & Son, Leicester; Heating and ventilating, Messrs. Ewart & Sons, London; sanitary fittings, Messrs. Mellows & Co., Ltd.

Notes and Comments.

"A Habit of Discipline."

Sir Frederic Kenyon, in proposing the vote of thanks to the President at the R.I.B.A. for his address, referring to the necessity of discipline in matters of Art, said:—

One wants a greater habit of discipline in the artists themselves. What I should like to see would be a revival of the old principle of the atelier, where you had a master of the craft, whether it was painting, or sculpture, or architecture, attended by a band of followers and pupils who studied his ways and learned all that he had to hand on to them of the tradition of the past, before they set up for themselves. Such a revival would at once strengthen our art and steady our criticism. Suppose that in architecture the leading living architects—however many they may be—had, each of them, a band of followers who were proud to follow them and to be reckoned as their disciples, you would get three, four or five main currents of artistic development, each with a respected leader at its head, each developing one particular line of thought. The pupils would have from their master a sound training in craftsmanship, a sound training in the ideas and principles of art, and then would be free to develop them in accordance with the dictates of their own genius. That is what happened in the great times of painting, and probably in the great times of architecture. It seems to me that the present state of things is perhaps a result of the English tendency to individualism: people are afraid of ranking themselves as the followers of anybody, for fear they should be supposed to be sacrificing their own individuality. It seems to me that all history is against that idea; the greatest artists have begun as pupils, and have eventually developed their own special line of genius.

We should say that, while agreeing with Sir Frederic in his view of the ideal desirability of such schools of thought as he suggests, the nearest approach to such an end will occur when a great designer like Shaw makes such an impression on his fellows that an informal school grows up. We can all think of some half-dozen men, some of them among us now, who have continued the Shaw tradition. In other words, if an architect is sufficiently great he does form a school of followers, and the fact that we have to-day too much undisciplined freedom is mainly the result of the fact that there are among our ranks few men whose personality and attainments are sufficiently outstanding to create such movements.

Freemasons' Hall.

Mr. Bernard Shaw objects to the suggestion made that the new Masonic headquarters should be located in the Adelphi, and considers that neither he nor his gifted neighbours should be disturbed. This is a distinctively Shavian view of the matter, and one which could have been anticipated. Mr. Shaw occupies the position of the medieval fool in motley, and may some day find that he has so thoroughly initiated the public to regard him as a jester that if he ever has a serious message for mankind he will not be listened to. We are afraid the Adelphi is sooner or later doomed, on account of its enormous site value, and the best we can hope for will be that it may be replaced by a building or buildings of real architectural merit, and that as much of the old Adam decoration and woodwork as possible may be re-erected elsewhere. The preservation of the ceilings is clearly impossible, but a ceiling can fortunately be reproduced with care.

Irish Housing.

The President of the Architectural Association of Ireland, at a meeting of that body, after commenting on

the unfairness of the British Government's scheme (1919), said under the Provisional Government scheme, which would provide houses at an inclusive cost of £750 per house, some 77 towns had prepared, or were preparing, a programme. He explained the form of the financial scheme.

If a municipal authority, the assessable valuation of whose district is £15,000, raised by a shilling rate £750, and borrows locally £2,250, making the local contribution £3,000, then the Government will contribute £3,000 × 2, i.e., £6,000, making available £9,000, sufficient to provide 12 new houses at £750 each, as the result of one year's operations.

The rent (including rates) of such a house at the maximum cost contemplated would be, on an average, about 10s. 6d. a week.

The scheme, it was understood, was of a temporary character owing to the Government being unable at such a stage to involve itself or its successors in commitments which would be inseparable from long period loans. Though the latter were preferable, as involving lesser annual loan charges and consequently lower rents, the present scheme has the advantage that in fifteen years the dwellings, free from heavy charges, become the freehold of the local authority.

Some of the reasons for the greater cost of building in Ireland as compared with England were (1) Higher wages in the building trade; (2) cost price of home materials, such as bricks, slates, etc., exceeding prices for similar materials in England; (3) higher freight on home and imported manufactured goods; and (4) increased agency commissions due to importation. Purchase by co-operation would reduce or wipe out the cost under the fourth head.

We shall be interested to see whether the Irish make as great headway in building as they have in the destruction of buildings!

"Architecture"

Under the above title the "Journal" of the Society of Architects has been enlarged and improved, with the hope that it will be more useful to the members and have some circulation outside the ranks of the Society. We publish a letter protesting against the venture as being undignified and as an interference with what are called "the trade papers." For ourselves we may say that we see no reason why the journal of the Society should not compete with the "trade papers" if it can with success, and no reason why the income derived from it should not be used to better the position of the Society. The first number is attractively produced, and contains some interesting matter, but we shall be in a better position to judge of its success after a year or two than we are now, for there will be some data to go on. The "Architect" has now celebrated its first half century, and its shortcomings and merits can be judged of by all. We neither can or wish to eliminate competition, and if others can do what we fail to do they will deserve what they have earned. We imagine that most of those concerned in a new journalistic venture start on their enterprise with high hopes and good courage, but they find by experience that it is not easy to give their readers just what every one of them would like in every issue.



DRAWING BY ELIHU VEDDER, OF ROME. (Illustration from his last work "Doubt.")

The World of Art.

(All rights reserved.)

I alluded in my last week's notes to the exhibition of paintings and drawings by Ilya Repin at the Leicester Galleries, reserving a fuller account for this issue. This exhibition is one of very special interest, which I recommend my readers not to miss. Repin was certainly one of the greatest figures in Russian art of recent years, who, the son of Cossack parents, had risen from the people to the front of his profession. Although he began his great career as a painter of Ikons, his art was in its sympathies realist and intensely Russian. Dr. Christian Brinton, in a brilliant study of this artist's work, points out that "although he remained six years at the Academy" (the Imperial Academy of Fine Arts) "Repin was never in sympathy with its ideals, nor did he palpably succumb to its traditions. Beyond everything he strove to attain verity of vision and rendering. The grip of the actual was already strong upon him, the potency of things seen and sincerely recorded exercised its own imperative appeal." A sketching trip down the Volga gave him his chance, in depicting the beauty of Nature and the sordid struggle of human life; and his "Bargemen of the Volga" was at once recognised as a masterpiece of the modern Russian school.

Coming now to the pictures shown this month in London, it is to be regretted that "The Cossack's Reply to the Sultan," that wonderful creation of Repin's genius, where "the mocking bravado of each countenance tells the same story in a different way," could not be amongst them. But we have the fine series of types of the Black Sea pirates, the first of which suggests in the figure the influence of Zorn, and the remarkable "Attack with the Red Cross Nurse," most terrible in its realism. Then a series of fine portraits, including those of the artist himself, of his son Yuri Repin, of Chirikov, Kerensky, and Leon Tolstoi. To me this three-quarter length of Count Tolstoi, looking out fixedly into space, his strong hands placed within his belt, seems a wonderful piece of psychology, giving us the very man himself: this is the face of an enthusiast, a visionary, and those fixed eyes look away from our life into the world of dreams. No less striking is Kerensky, painted in 1917, seated in the Winter Palace, the sunlight striking across the face and figure: all the tragedy of the man's life and failure seems already foreshadowed in this bowed figure. I cannot myself place the portrait sketches in the same class at all as these finished portraits. They are clever impressions, no doubt, but such a study as that of Mme. Poradovskaya (1907) does not carry in the same way the stamp of Repin's individuality.

I reserved also for this week my notice of the autumn exhibition of the Royal Society of British Artists, which has lately opened. Among the water-colours in the first two rooms I noted specially the "Crowland Abbey," by Percy Lancaster, and "Chichester Cathedral from Goodwood," by Vivian Rolt, who has studied our early masters of British water-colour to good effect, and with these a

group of studies of boats by W. T. M. Hawksworth. On the next wall are Barry Pittar's two paintings "Honfleur" and "Gondola"; but the most noticeable water-colour in the room, though hung so low that it hardly has a fair chance, is J. Littlejohn's "Dewpond." Here the low horizon line and the luminous sky, reflected in the water of the pond, make a most telling effect, and with this I should mention Ernest Haslehurst's study on the next wall of "Bruges Belfry in Early Morning." Mr. John Austen here treats the theme of the "Judgment of Paris" somewhat on the lines of an Etruscan wall painting, and Henry Bulman's "Captive," a figure study of a red haired girl, is too obviously a studio model posed on the stand with some pretty drapery or cushions to sit on. In the next room the work in water-colour of Fred Footet ("Keswick and Skiddaw"), of Madeline Wells, and H. G. Theaker is not to be overlooked, and Mr. Haslehurst has here a good study of "Edinburgh High Street"; while in the Central Gallery the place of honour at the end is taken by the President's large presentation painting of the Coronation lunch at the Guildhall in 1911, to which I alluded in my last week's notes. An excellent later portrait by Mr. Solomon J. Solomon is that of Viscount Lascelles, K.G., facing this last at the other end, and two very effectively hung groups are Mr. Hely Smith's seascape, "A Sultry Calm," with, on either side, Handley Read's delightfully cool and fresh figure subjects "Morning Melody" and "The Fairy Pool," and on the opposite wall Orlando Greenwood's strongly painted half-length of "The Keeper," hung between a "Haute Loire Scene," by Leonard Richmond, and a Cumberland landscape by Fred Footet, both in rich luminous tones of purple or blue. The best figure work here by Mr. Handley Read is "The Parting of the Ways," and Orlando Greenwood gives us the story of Susanna as a still-life. In the end room the familiar beach scenes by Dorothea Sharp and the studies of fishing boats by Marcella Smith have individual character.

At Thomas McLean's Gallery, in the Haymarket, Mr. Boardman Robinson has been showing a group of drawings and caricatures which I should be inclined to classify as political cartoons and political portraits. These are charcoal drawings, put through with a strong line, and varied by occasional lithographs, and there is no doubt as to their power. Examples of the cartoons are "Russia, 1918," where the figure of that unhappy country is seen surrounded by savage and hungry beasts, "The Traitor," showing Christ Himself put up, like Edith Cavell, against a wall by a platoon of Boche soldiers, and "Earth," the figure of a woman lying on the ground with the dawn rising behind. In the "Board of Directors" we find something of the inspiration of Forain; and the portraits of Mr. Lloyd George, with an amiable smile, of the American Ambassador, of Mr. H. G. Wells, and, above all, the lithograph of Walt Whitman, are excellent.

That fine creative artist F. L. Griggs, A.R.A., is showing a number of his etchings at the Twenty-One Gallery, in which his love for Gothic architecture finds expression in

imaginary scenes or actual places. The set of Stoke Poges Church, given here in six states of the plate, is of special interest, and what has been called the architectural set, including "The Minster," "The Ford," "The Pool," "The Cresset," and "The Quay," shows (for all these are, I believe, imagined architecture and setting) the artist's imaginative power. Mr. Griggs frequently goes on working and improving his plate; "Minsden Episcopi" here is a good instance.

Baxter colour prints are much before the public at this moment, and the Sunderland Gallery has done well to organise an exhibition from the collection of J. R. Hall, Esq., D.L., of Newcastle-on-Tyne, which was opened by the Mayor of Sunderland on October 27. George Baxter, who was born at Lewes in 1804, was inspired by the famous Newcastle engraver, Thomas Bewick, to carry forward the art of printing in colours: so that the present exhibition, organised by the able Director of the Sunderland Gallery, Mr. Charlton Deas, from a Newcastle collection is entirely in place. Baxter created his own method of oil colour prints, which he patented in 1835 and again in 1841.

His work is justly admired both for its colour and design.

The famous American illustrator of "Omar Khayyam," Elihu Vedder, artist and poet, is now, at the age of 86, publishing his last volume of verse and illustrations, which will appear at Boston, U.S.A., under the title of "Doubt." I look back to many pleasant evenings at Rome, where the veteran artist has been settled for years, and to enjoying the privilege (for it was such) of hearing his talk, the experience of a life seasoned with a keen personal sense of humour. The present volume will contain numerous drawings and twenty-one full-page illustrations from some of Vedder's strongest work.

Present exhibitions of interest include the Fine Art Society ("Cornwall," by Lamorna Birch), Walker's Gallery, and the Alpine Club Gallery. I am obliged to defer these, as well as the important Winter Exhibition of the Grosvenor Gallery, to my notes for next week.

S. B.

Northern Architectural Association.

The following is the first portion of the President's address, delivered on November 8:—

An encouraging sign of the times to our profession is the increasing interest taken by the public in architecture. In an issue of "Country Life," so recent as October 21, a series of articles is commenced entitled "The County Towns of England." The first very appropriately chosen town is Bath, and photographs are given with detailed letterpress of the beautiful buildings, described as a stately procession of noble streets, squares, crescents and other architectural forms, and comparisons made with the modern Bournemouth as most nearly answering to the same requirements as a health resort.

This stimulating of the public interest in architecture by our great journals should be looked on with great favour by all societies associated with the art.

One of the many privileges of following architecture, painting or sculpture is that those practising the arts have the advantage of being able to study the works of former generations, and I think of all the professions the study of existing works, ancient and modern, benefits most the followers of architecture. Our own works, although not built for all time, it may be, yet may presumably be taken to be lasting and enduring, will be occupied possibly by generations of men, should be adaptable to the comfort of their many occupants, and receive all our skill and care during the often short space of time that we are allowed to fashion them. I often think that we architects, if we allowed our minds to dwell on the blessings or otherwise that would be passed on our works during their existence, would be sometimes appalled at the responsibilities we undertake and frighten ourselves as to the successful outcome of our schemes. This responsibility for our clients' money and the lives of those using our buildings should not be taken by us too lightly, or allowed, on the other hand, to oppress us unduly. If we give of our best, we at all events feel that we have done so, whatever the outcome, and we will derive satisfaction from knowing and feeling that we have spared no pains to do our best. Let us always remember that human efficiency is the most important factor in business. It is a quality not to be measured, but in applying the test to those it is our duty to supervise let us equally apply it to ourselves.

I read a few days ago that every man is endowed with sixty qualities. These were not detailed, but I gathered that if you nourished and used your qualities you would develop efficiency; and to be able, you must think right and remember, and surely, one of the most difficult faculties to cultivate is remembering what is important and losing hold of what is of little value.

These thoughts come to me as I address you for the second time as your president. I feel the responsible position that you have elected me to. I mix with and hear the views and am impressed with the earnestness and ability of the foremost members of the profession, who, owing to my position as your president, I come in contact with. I see as I go over the country the wonderful works now being erected in London and our other large cities, and self-examination should make us say: "Am I doing in proportion to my talents as well as others?" I assure you that this office of president of your association offers great facilities for broadening of views, and directs thoughts to the serious problems of our profession.

I can only touch very lightly on a few of the many sides of our work in the time to-night at my disposal.

Permit me to recall the words of Mr. John Slater addressing the Architectural Association in 1887, even as Mr. Slater then recalled the wonderful formula used in the installation into office of the Architect to Royal Palaces in the fifth century. Mr. Slater's words are as full of life and as appropriate to us to-day as they were thirty five years ago. He says: "We have a responsibility not only to our clients but to our colleagues. We should each of us consider that in us as individuals is deposited the honour of the whole body, that a delinquency on our part, a lapse from the high standard which we should set up for ourselves, or even only a manifest display of incompetency in work which is entrusted to us, may do far-reaching harm and is a slight upon the other members of our profession. We should bear in mind, as Bacon says, that we have 'as well to create good precedents as to follow them,' and although we cannot each be a Michael Angelo or a Brunelleschi and hand our name down to posterity 'in records that defy the tooth of time,' we can all earnestly endeavour to do thoroughly and well the work that comes immediately to our hand."

Unification and registration must in the coming year engage our earnest attention, and I would ask: Is not our aim something more than to shut up the unqualified man who calls himself an architect? That is only a phase of our profession and a circumstance of the hour. Our aim should be to qualify him to be an architect, to make him fit to be one of us; and if this is not possible, to aim at his successor becoming one of us and a unit of a united profession. My idea of unification and registration is to unite first, and I have already put my views before the Institute through the Council of Allied Presidents—that all is not done that might be done by the Institute. I consider that a roll call should be made by the Institute and Allied Societies of all practising architects and their staffs, and that all pupils and assistants should be approached and appealed to by the Institute officially to qualify for membership. I know a great deal is done in this way by principals, but not always, and a continued movement by the Institute would be bound to be attended by good results. I think if this were done we would get so much larger a membership that registration would follow easily. This appeal, I may say, has attracted the notice of the Cape Institute of Architects, whose secretary has written to say that the Cape Institute has been particularly interested in the scheme to further the inducement for every young architect to qualify for the Institute.

The elections, however, have overturned the policy of the Council of the Institute, and we as members must be loyal to a majority. If 50 per cent. of voting members returned a majority for the present registration proposals for the Institute, and 50 per cent. of the members did not trouble to vote, then it is clearly the duty of the governing body to frame a policy to conform with the majority voting. This is being done, and no doubt we will shortly have laid before us a Registration Bill for consideration. But I still maintain that a united profession is the higher aim. Meeting as we have to-night means unification; every little help we give to each other means unification; the friendly acceptance of our little defeats one over another helps unification; the encouragement and help extended to those under our care means unification; the aid we give to our local associations, our loyalty to the Institute, and the care we take with our daily work, all make for unification and registration, or registration and unification, whichever you prefer.

The President concluded his address by a careful and clear analysis of the many problems which have to be dealt with by the provincial architect affecting property and business, and discussed new materials and the problems connected with them; but considerations of space prevent our giving an interesting address *in extenso*.

C



THE ROCIO, LISBON.

Notes from Portugal

By G. A. T. MIDDLETON.

No. V.—Lisbon.

At first sight Lisbon is a disappointment. The city was destroyed by earthquake, followed by fire, in 1785—wiped out as completely as was the old City of London in 1666. The subsequent reconstruction presented a great opportunity, but it was only partially grasped (though considerably more was done than in London), and in the result we have a third-rate miniature Paris, so far as the modern town is concerned. Yet its situation is superb. The town faces an immense land-locked harbour to the south, with a valley running directly northwards between a series of hills to east and west; and the valley has been utilised in the obvious manner. A great square, the Praça do Comércio, faces the harbour, to which it is open on the south. Its centre is occupied by an equestrian



EGREGA DO CARMO, LISBON.



TRIUMPHAL ARCH, PRAÇA DO COMMERCCIO, LISBON.

statue of proportions beyond anything we have at home and on a well-designed pedestal, and in line with it on the north is a great triumphal arch, worthy, in size at least, of its position. Opinions may well differ with regard to its design, so the less said about it the better; but unquestionably the buildings which flank it on either side and also occupy the east and west ends of the square are merely commonplace, though they are all government offices, their only merit being that they are uniform.

For some distance to the north of the Praça do Comércio the valley is laid out upon the gridiron plan. Two of the main south-north streets, one of which starts from the triumphal arch, lead to another square, the Rocio, but the others lead to nowhere in particular, and the opportunity for a good central shopping boulevard was lost. However, the Rocio itself is finely conceived, and its fountain at least deserves detailed attention; but the square is



AVENADA DA LIBERDADE, LISBON.

really dominated by a column, as is Trafalgar Square, and, above its base, the proportions of the column are highly unsatisfactory. As a result the really considerable beauty of the theatre which occupies the north of the square is hardly noticed.

Its introduction at all, however, was a mistake, for the valley here turns somewhat to the west, and a great opportunity presented itself for clever treatment of a diverging axis. The theatre, however, abruptly closes the vista, and comparatively mean streets lead past it, for a hundred yards or so, to the commencement of the Avenida da Liberdade, which rises slowly till the Parque Edouardo VII. is reached.

In spite of the lost opportunities, however, something was at least attempted in the valley, and a certain measure of success achieved. But the hills appear to have been given up as hopeless, and hopeless they remain, with their narrow streets and impossible gradients. It is all exceedingly Portuguese, as purposeless as the pattern of the variegated pebble pavement in the Rocio, carried out with the extremest care—and leading nowhere.

Still, in spite of the earthquake, there is something to be found upon the hills which tells of another Lisbon, to him who looks for it. There are, for instance, the ruins of the church "do Carmo," now used as an archaeological

museum, and itself an edifice in which Renaissance and Gothic elements are curiously blended. The nave arcade, in spite of its pointed arches, is wholly Renaissance of a singularly refined sixteenth-century type. By using high pedestals, slender shafts, and tall Corinthianesque capitals, even the "Order" is brought into harmony with the generally aspiring tendency of work whose basis of construction is Gothic. Much of the older true Gothic work still remains in the outer walls, but if anything this enhances the significance of the arcade, for quite obviously there is here a new idea which it might be well worth while to develop, with the possibilities in it of purely refined beauty.

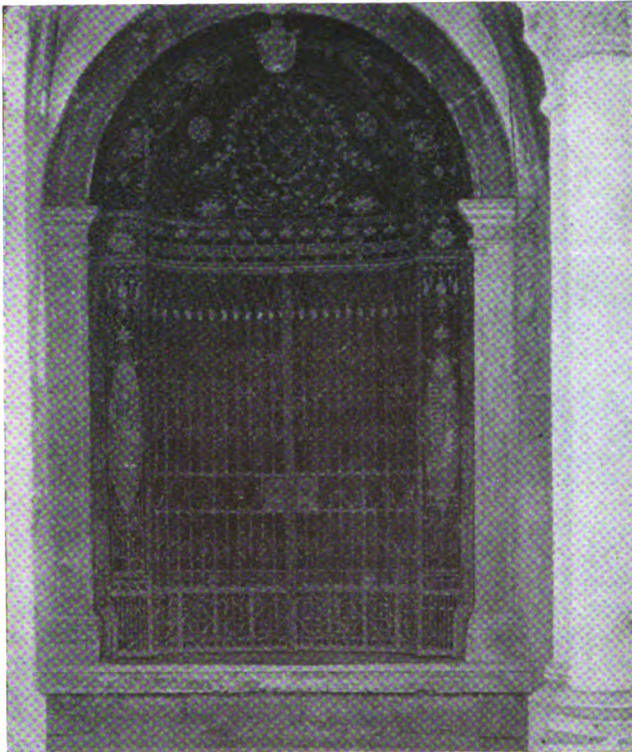
On another hill, to the east, is the old cathedral. After the earthquake the ruins were encased with plaster and the interior converted into a Renaissance monstrosity of gilt and colour. Something has happened. The plaster work has given way, and it is now being removed with care, disclosing what is below, and this is being restored, little by little, and being very well done. But the great time to see it is now, before restoration has gone far, for the old, as it is revealed, is all worthy of minute study; and it is of the greater interest in its revelation of English influence combined with French—in the greatest Portuguese harbour.

This is evident, for instance, in the occurrence of the English ball-flower in a fourteenth-century doorway in one of the aisles; but much more so in the cloister, at present better exposed than any other part. The general outline is Portuguese, the double-pointed lights being surmounted by the frequent large circle; but the plain pointed arches with their strong angle rolls are French, and so are the usual capitals of the hart's-tongue fern of the French thirteenth century—and even the exceptional François I. capital which occurs in one instance, evidently as a replacement of one destroyed. But the ornaments of the circles are English, for though the repeated billet might be Norman French, the dog-tooth is very rarely found outside of our island, and then only under direct English influence. So well, however, have these various elements been combined that there is not the slightest incongruity in them. The whole composition is evidently that of a man who was, above everything, a master mason of his day, imbued with the full spirit of the time in which he worked—whether Portuguese, or Norman, or Frenchman, or Englishman it matters not—but at any rate one who had travelled and had absorbed into his being all that was best of the fashionable architecture of that date in each country he had visited. Is not this what the best of us still strive to do?

An iron gate in the cloister points, like the introduced capital, to there having been French influence at work there again in the sixteenth century. It is delicate in the extreme, and enriched with emblems of the sufferings of Our Lord, such as the scourge and ladder, exquisitely wrought. Strange to say, the plan is that of a semi-ellipse, and the grille over the gate is cleverly worked to fit, and is of a fine wreath design.



CLOISTER, LISBON CATHEDRAL.



GATE IN CLOISTER, LISBON CATHEDRAL.

Doubtless more old fragments could be found if a long and diligent search were made, but guide books are silent, and the inference is that not much escaped the earthquake, at any rate until the outer suburbs are reached.

"The Architect" Fifty Years Ago.

NOVEMBER 16, 1872.

REBUILDING OF THE HOTEL DE VILLE, PARIS.

A number of plans have been sent in for the reconstruction of this fine old city palace, but the opinion is that none of them have a chance of adoption. The view of the Municipal Council was that the edifice should be re-erected as nearly as possible after the plans of the original architect, Boccador, and his successor, Martin de la Vallée, and the artistic public has certainly taken the same view of the question. The competing architects have not, however, taken the same view, they have launched out into all kinds of new conceptions, not to say fantasies, and have almost entirely ignored poor Boccador and Martin de la Vallée; but the present administration is not likely to be led away by any wild proposal, it has a glaring warning before its eyes in that portion of the river-front of the Louvre, rebuilt in the latter part of the late empire; the architect took the exquisite building of Henri II. adjoining for his model, and then most unhappily set to work to *improve* upon it. In place of the chaste panneling between the windows of the first story of the old building, we have in the new portion rustic work, elaborately tooled like the clothing of a modern Italian statuette, carried up to half the height of the building, and the originality of the new building is exhibited in the arcades which join the two, which are preposterously out of proportion with the original design.

It is to be hoped that an architect will be found who can enter into the true spirit of Boccador's designs, whilst making the necessary changes to meet modern requirements; if not, it would be infinitely better to reproduce the grand old façade without any improvement whatever. The latter portions of the old edifice were poor enough when compared with the old central part.

The important contract for the widening of the main line track from Fletton Junction to Peterborough for the Great Northern Railway Company, has been placed with Messrs. Harold Arnold and Son (Ltd.), Doncaster. This work will comprise the construction of a large viaduct with a span of 220 feet over the river Nene; the widening of three bridges, including one over the Midland and Great Eastern Joint line; the erection of retaining walls, and the laying of the new fourth main line track and earthworks. The contract for the steelwork has been obtained by the Cleveland Bridge and Engineering Company of Darlington, and includes the superstructure of the four bridges.

Competition News.

The Douglas Town Council (Isle of Man) invite competitive plans, designs and estimates of cost for the laying out of their Hills Estate, containing about fourteen acres, for the erection of four and five-room houses suitable for the working class; twelve houses to the acre. The first and second prizes will be £50 and £20 respectively. The Council do not intend to engage the successful competitor to carry out the work. The successful plans and designs, and all rights therein, to become the absolute property of the Council to adopt in whole or part as they may deem desirable without further payment. Copies of the plan of the estate and of the instructions are obtainable from Mr. H. A. Bridge, borough surveyor, on deposit of £1 1s. Sealed plans must be sent not later than December 16 to the Town Clerk, Mr. A. Robertson.

The R.I.B.A. Competitions Committee have been in negotiation with the promoters of the Old Cranleigh Society Cricket Pavilion Competition, and the Conditions are now in order. The veto of the Royal Institute of British Architects is accordingly removed, and members are at liberty to take part in the competition.

Members and Licentiates of the Royal Institute of British Architects must not take part in the Ryde Pavilion Competition because the conditions are not in accordance with the published Regulations of the Royal Institute for Architectural Competitions.

The Royal Institute of British Architects.

EXAMINATIONS OVERSEAS.

The Examinations have been held in the following centres Overseas:—Cape Town, Melbourne and Sydney.

CAPE TOWN.

Of the 5 candidates who were admitted to the *Special War Examination*, 4 passed and 1 was relegated.

The successful candidates are as follows:—

HART: EDWARD GOYEN, 85, St. Georges Street, Cape Town.
MILLIGAN: THOMAS WILLIAM, Ashton Lodge, Antrim Road, Three Anchor Bay, Cape Town.

STOCKS: CLIFFORD WILLIAM BURNETT, City Hall, East London, S. Africa.

TAIT: ALFRED ALEXANDER, Grahamstown, S. Africa.

The following candidate passed the *Special Overseas Examination*:—

WILSON: JOHN GODDARD, 1030 Arcadia Street, Pretoria, S. Africa.

MELBOURNE.

Of the 9 candidates who were admitted to the *Special War Examination*, 5 passed and 4 were relegated.

The successful candidates are as follows:—

EALES: WILLIAM HENDERSON, 26 Blessington Street, St. Kilda, Australia.

FINLAYSON: MALCOLM, Main Street, Heidelberg, Victoria, Australia.

HENDERSON: WILLIAM A., 469 Chancery Lane, Melbourne.

MARTIN: MARCUS WILLIAM, 352 Collins Street, Melbourne.

WILLIAMS: PERCY SCOTT, Works and Railways Department, Commonwealth Federal Works Department, Melbourne.

SYDNEY.

Of the 11 candidates who were admitted to the *Special War Examination*, 3 passed and 8 were relegated.

The successful candidates are as follows:—

MILLS: JOHN CHECKLEY ROBINSON, 38 Martin Place, Sydney.

PHILLIPS: HERBERT ERIC, Heretaunga Street, Hastings, Hawkes Bay, New Zealand.

PHILLIPS: LIONEL BLYTHEWOOD, "Blythecote," Wyatt Avenue, Burwood, Australia.

One candidate sat for, and was relegated in, the *Special Overseas Examination*.

The following candidate passed the *Intermediate Examination*:—

HODGSON: FRANK LESLIE, 5 West Street, North Sydney, N.S.W.

The Rotherham Rural District Council, on Monday last, executed contracts with Messrs. Memory and Oats, Catcliffe, for the erection of twelve houses at Swallownest, at £390 per house, including lands, roads, sewers, etc., and with Mr. C. Boyd, Rotherham, for the erection of public conveniences at Thrybergh.

Mr. Howard Henry Thomson, F.R.I.B.A., of Woodhouse Eaves, and 8, Market Street, Leicester, died on the 12th inst., aged 57 years, at a nursing home in London.

The Society of Architects.

A meeting of the Society of Architects was held at their premises, 28 Bedford Square, W.C., when Mr. E. J. Partridge, F.S.Arc., F.S.I., gave his presidential address, from which we give the following extracts.

One of the most important matters which, in my opinion, requires our earnest consideration, both individually and collectively, is the necessity of ensuring increased recognition by those interested in building—viz., our employers and clients, whether actual or potential—of the important part played by architects in the scheme of national service as servants of the public entrusted with the production of buildings which will, in every particular, efficiently meet the requirements for which they are designed, whether for private, municipal or commercial enterprise, or for educational or religious purposes, or for the housing of the people.

This desirable condition of affairs cannot be fully realised until the building owner is as convinced of the necessity of going in the first place to an architect for advice on the subject of the proposed building as he is of the necessity of consulting a medical man or a solicitor immediately the need for the services of either of these practitioners becomes evident. In my view, the person best able to bring about this state of affairs is the architect himself, who must, if he is to be worthy of the name, not only qualify himself in every branch of his profession, but must always keep himself in touch with the most modern methods of construction and equipment, so that he may with justice hold himself out to the public as qualified to advise the potential building owner as to how he may, to the best advantage, utilise the capital which he proposes to invest. The result desired will not be attained by the production of a building of artistic merit only, for no matter how beautiful the building may be from the æsthetic standpoint, if it fails in actual service of user the architect cannot be considered as having successfully solved his problem. It is therefore incumbent upon the architect in his own interests, as well as in the interests of the community, that he should so carry out his work in every detail, whether artistic or utilitarian, that potential employers will recognise that the services of an architect are a necessity to the building owner and not, as is sometimes the case, particularly in regard to smaller works, a luxury.

This leads up to the question of architectural education, in which great developments have been made during recent years. The established practitioner must improve and increase his knowledge by the continual study of the many problems which now arise in consequence of the great change in the conditions of modern life. With regard to architectural education in the early years of professional life, the old system of pupilage, which is not altogether without its good points and was at one time considered the only proper way of entering the profession, is being rapidly superseded by the architectural schools, and it should not be forgotten that the Society of Architects was the pioneer in establishing in this country, in 1913, the first atelier of architecture for the purpose of promoting improved methods of architectural training in Great Britain. The work commenced by the Beaux Arts Committee, and carried on ever since with the assistance of the Society, was at the time the subject of much hostile criticism: but the fact that the method then advocated has since been widely adopted by the architectural schools and that other ateliers have been established and co-ordinated under the auspices of the Royal Academy Atelier Council, is sufficient to justify the claims of the Society that its efforts have resulted in revolutionising and improving the architectural educational system in this country. There never was a time when architects had such opportunities as exist at present for education in professional matters in all stages of their careers. Apart from the financial support which the Society gives from time to time to other kindred educational bodies, it has itself evolved and established a system of educational competitions in design and other subjects for the benefit of its members, on lines which enable those at a distance to participate equally with others nearer to headquarters, and there is a scheme in preparation the object of which is to afford those members who, because of distance and other reasons, cannot take advantage of the facilities afforded to the architectural schools in the larger centres, some guidance and assistance in their efforts to improve their qualifications.

But the Society does not exist solely for its members, and in education as in other matters it takes a much wider view, and one of its most striking successes has been the institution of the Victory Scholarship Competition in design, open to any British subject. This year upwards of 60 candidates entered for this competition from all parts of the kingdom, and those who were able to see the designs and to listen to Mr. Robert Atkinson's recent criticism thereon will realise the value of this competition

to all those who participated in it, whether successful or not in obtaining any award.

One result of this competition was to emphasise the remarks which I have previously made in regard to the designing of buildings, inasmuch as while many of the drawings submitted exhibited beauty and harmony in design and clever planning, some of the most conspicuous in this respect failed to realise one essential requirement, that relating to the assembly and dispersal of vast crowds of people and of vehicular traffic, a defect which shows that the competitors failed to solve the problem in its entirety, and therefore the building could not be considered as satisfactorily providing in all respects for the purpose for which it was designed—viz., a Stadium for Olympic Games.

A reference to the Victory Scholarship would be incomplete without mention being made of the fund which was established after the war as a memorial to those members who fell, the interest on which is to provide a scholarship of the value of £100 per annum. This fund now stands at approximately £800, so that there is a balance of about £1,200 required to complete it, and it is hoped that the generosity of those members who have not yet contributed will supply the deficiency.

Having provided for the education of the architect, it is in the interests of the public that all who wish to enter the profession of architecture should first be called upon to qualify themselves and to prove their qualifications under a Statutory Examination before admission to a Register under an Act of Parliament. The Society was founded nearly forty years ago for the purpose of obtaining the statutory registration of architects, and although, owing to its growth and activities, it has developed in other directions as well, it has not lost sight of its main object and is always pressing forward to its consummation. The sooner efficient registration is effected the sooner will begin the weeding out of the unqualified man to the advantage of the public and of the profession. One result of the Society's long continued and strenuous efforts has been that the whole profession has become consolidated on the desirability of obtaining registration, and the only point of difference has been, and is, on the method by which to attain it. It is some two and a half years ago that the R.I.B.A. Council formed the Unification and Registration Committee, the most comprehensive body ever gathered together within the architectural profession for one purpose. The Society of Architects was invited to become one of the constituent bodies and very gladly accepted the invitation, and its representatives took a very active part in the proceedings. The Society had previously, from its knowledge of past difficulties in regard to the amalgamation question, suggested a federation of interested bodies for the purpose of securing registration, and this was the basis of one of the two schemes placed before the Unification Committee for its consideration and approval. After full and open discussion the Committee eventually expressed its preference for a scheme which was in essence, so far as the Society of Architects was concerned, a proposal for the absorption of that body by the Institute, and the Society, anxious for unity, acquiesced in the vote of the majority and heartily supported the principle of the scheme selected and was in the midst of negotiations with the Institute Council on questions of detail when it became apparent that a divergence of opinion had arisen amongst the Institute representatives on the Committee, not only on questions of detail, but of principle also, so that, whereas the proposal of the majority was for unification as a preliminary to registration, a minority of the Institute side took the opposite view—viz., that registration should be accomplished first. This difference of opinion was reflected in the election of the Council of the R.I.B.A. in June last, when, with only a few exceptions, an entirely new Council was formed, and one of its first acts was to intimate to the individual members of the Society on the Unification Committee that its work was at an end and their services no longer required. This was followed, some time afterwards, by an intimation to the Society as a body to the same effect, notwithstanding the fact that the Unification Committee was still sitting to arrange details of the scheme and had not completed its report. I think it is nothing less than deplorable that this situation should have arisen and that the Institute Councils should have taken so drastic a step without first consulting those bodies whom it had invited to join the Committee. It has since been stated in the professional journals that the Institute Council has formed a Registration Committee of its own and is making arrangements for the early presentation of a Bill to Parliament. It is well known, however, that Parliament will not give a hearing to any proposal of the kind which is not supported by all interested bodies, and members of the Society may rest assured that their Council will take whatever steps may be necessary to see that the interests of its members are not affected adversely by any proposals which may be put forward by any other body in regard to a matter which affects the whole profession.

Another matter of general interest to the profession is the production of a form of contract which shall be accepted by all parties to that contract. At the present time, as you all know, there are many different forms in existence, and in most of them it appears to have been the aim of the person drawing it to obtain some advantage over other parties to the contract. It surely is not beyond the power of reasonable men to devise some general form which shall be fair to and acceptable by all parties, and if each party will consider the question from the other fellow's point of view as well as from his own, I feel sure that such a form will be produced. There is now sitting for this purpose, a Committee composed of representatives of all bodies concerned, and although their deliberations will involve much time and thought it is hoped that the object for which the Committee was formed will ultimately be attained.

The President then dealt with the desirability of increasing the membership of the Society and the improvements introduced into its *Journal*.

Correspondence.

"Architecture"—The Paper.

To the Editor of THE ARCHITECT.

SIR,—I write to you on what is perhaps a delicate subject, but I wish my views thereon to receive wide publicity, as I am sure that they will be strongly supported, and may do good.

I see that there is a proposal that the Society of Architects should issue its "Journal" as a commercial venture, under the title of "Architecture," to be sold and published all over England.

This I deprecate most strongly. Firstly, it is surely *most undignified* for a professional society to issue a trade paper or be responsible for a money-making venture: I don't think they go quite so far, even in America, where architects and engineers advertise.

Secondly, with regard to the attempt to "educate the public" (and take their money), I think that this is a crude way of trying to make money by saying in effect, "You buy our paper, because we obviously know more about our subject than the trade journals do."

The man in the street says either: (1) this is a paper which some little society uses as a medium for its official proceedings, which is damaging to the prestige of the society; or (2) (if he knows the publishers) why should I pay for this paper, and thus help to cheapen the subscriptions of the members of this society?

If the Society wants more money, let it raise the members' subscriptions.

If it is out to educate the public, it can do so equally well with a "Journal" under its own title, provided that that "Journal" is properly edited and got up. In fact, if I were the public and wanted to be educated in architecture, I should say: "Well, let's have a look first of all at the 'Journals' of the R.I.B.A. and the Society. If they aren't good enough, I will look at the trade papers."

I believe in the dim past (about 1887 or so) the Society had a fancy name for its "Journal," which was soon dropped. Let us hope that the proposed new fancy title will be better than that, and never come into being.

Faithfully yours,

M. S. A.

October, 1922.

[The above letter reaches us from Uganda. Our remarks on it will be found under Notes and Comments.—Ed.]

Forthcoming Events.

Friday, November 17.—Exhibition of Architects' Working Drawings at R.I.B.A. Galleries, 9 Conduit Street, W. Special Students Evening. 8 p.m.

Monday, November 20.—Royal Institute of British Architects. The Earl of Crawford and Balcarres, K.T. (Hon. F.R.I.B.A.), will unveil the War Memorial Tablet at 9 Conduit Street, W. 3 p.m.

Royal Institute of British Architects. Meeting at 9 Conduit Street, W. Paper by Mr. Lawrence M. Tye, entitled "Illuminating Engineering in Relation to Architecture." 8 p.m.

Wednesday, November 22.—Royal Society of Arts. Meeting at John Street, Adelphi, W.C. Paper by Ex-Bailie William B. Smith, O.B.E. (Glasgow), entitled "The Economy of Smoke Abatement." 8 p.m.

Institute of British Decorators Meeting at Newcastle-on-Tyne. Paper by Mr. W. J. Pearce, entitled "How, When and Where to Use Colour and Ornament." 7.30 p.m.

St. Paul's Ecclesiastical Society. Meeting at 7 St. Andrew's Street, Holborn, E.C. Paper by Mr. E. W. Harvey Piper, Hon. A.R.I.B.A., entitled "Gloucester Cathedral." 8 p.m.

Town Planning Institute.

A general meeting of the above body was held on Friday, the 10th inst., at 92, Victoria Street, S.W. (by permission of the Institution of Municipal and County Engineers), when Mr. H. V. Lanchester, F.R.I.B.A., delivered the Presidential Address.

In his opening remarks, Mr. Lanchester attributed the success of the Town Planning Institute to the broad and logical spirit in which it had considered its work and the absence of any narrow professionalism or jealousy in every decision taken. The President then proceeded as follows:—

The clearer idea we have of the ultimate aim, the better our work will be, but while this ultimate aim is the concern of all, our special interest is in devising the means by which it can reach achievement. Now let us consider how best to advance the art which has taken such a hold on our imaginations.

A new visualisation has been afforded to us, and we should be less than men if we fail to take advantage of it. What we are engaged on is not merely the exercise of a profession according to the usually accepted standard, it is a co-ordination of the work of all the professions, and if those more definitely represented in this body are obviously required to shoulder the imaginative and executive functions, it is good to feel that we do not exclude anyone who can make a contribution to our ideas from a standpoint outside these.

In the degree to which we are able to assimilate and appreciate these ideas will our own work be successful or otherwise. Even in the more limited range of what may be termed active membership a quite important series of function may be defined, all of which impinge and overlap. Let me offer the following as a definition of the work of our four groups:—

| | |
|-----------------------------|----------------|
| IMAGINATIVE ART | The Architect. |
| IMAGINATIVE SCIENCE | The Engineer. |
| ECONOMIC SCIENCE | The Surveyor. |
| JUSTICE | The Lawyer. |

We must all have realised that without the full representation of these, all dominated by the underlying demands of human welfare, the results will fall short of our ideals, and though many have tried to extend their personal range as far as possible in order to do justice to this work, there is no one who can fail to have felt at times that he would have welcomed the aid of the other branches.

It is not too easy to enter into the attitude of mind of those who are to derive benefit from our work, to estimate how far it would be reasonable to draw them in a direction that may not make an immediate appeal, though one may be convinced of its ultimate value. In matters like this, special care has to be exercised that a personal predilection does not get undue weight, and the arguments for and against require very clear recital. On the other hand, if the mere statement of demands is too rigidly kept in the forefront, there is grave risk of missing some broader solution of exceptional value, as our clients are not—nor can we expect them to be—imaginative. Imagination is fostered by technical experience, and the power of visualising things non-existent which this gives. It is our greatest asset, provided that we have the self-restraint to test it by the arguments of utility and reasonableness. As in my definition, I claim that both art and science give scope for imagination, this is in no way a brief either for my own profession or for release from practical demands. Even the most skilful devices for beauty or organisation cannot be offered without reference to economic tests or the justice of their employment in respect to the interests the Town Planner is representing.

My own belief is that it is best to design a scheme on the broadest possible lines, and then to set to work to challenge its general features by such tests as are available. This is no doubt owing to the fact that much of my work has been of the nature of setting out the main lines of a scheme to be developed by others. Indeed, the time at my disposal has often compelled me to put forward propositions in a tentative form without the economic details admittedly necessary. I have done this deliberately, feeling that any proposition of the kind should have its chance, and that it is better to go a little too far rather than not far enough. Where one is provided with data in the form of graphs and tables, it gives the best possible chance for the preparation of a sound scheme, and in many cases I have often received most valuable assistance of this kind, but, on the other hand, I have at times been called in to settle some urgent question without even a reliable survey, which can hardly be considered satisfactory.

Having reviewed our position on these general lines, it is time to look more closely into detail and to form an impression as to the directions in which action would be most productive in results.

During the life of this Institute a much wider scope for the

activity of the Town Planner has received general recognition. In the early days of Town Planning it was seldom regarded as possible to proceed otherwise than by the control of private enterprise, then the emergency measures due to war conditions brought in the public bodies and large concerns, under the assisted schemes, and we are now in a position to compare the results of the two methods and their subsidiary varieties. In one respect these public schemes have been of immeasurable value, in that they have raised the general standard of design and show a homogeneity not attainable under other circumstances.

Whether, in the future, we shall see so many schemes of this comprehensive character or not, they have set up a standard as to the right type of development that we should not have attained without them, and have made it impossible to go back to the scrappy and conflicting procedure of the past. At the same time, we must not remain supine on the assumption that what has been done reaches finality; while a great deal of valuable work has been put into city extensions and large suburban schemes, I think that we must all feel that much might still be done in the improvement of our cities themselves. We are familiar with the American plans for city remodelling, and those for the reconstruction of the wrecked towns in the war zone are of the very highest interest, but in the first case the conditions are remote from our own, and in the second the large measure of destruction justified more drastic treatment than would ordinarily be feasible. At the same time, both are instructive, and we may hope that the increasing interest in this aspect will afford us justification for making a closer study of our towns with a view to the preparation of schemes for their amelioration and embellishment.

While I need not assure you that for my own part I have always felt a keen interest in the maintenance of the characteristics and traditional aspects of our great cities, I feel that without doubt the time is approaching when they will need to undergo very definite re-organisation if they are to maintain their efficiency from both the industrial and social aspects. What these changes will be it is difficult to foreshadow, and I will content myself with pointing out a few questions in which we might be well advised to keep an open mind, pending theoretical studies and practical tests on points affecting them.

Perhaps the most obvious is the extent to which flight will develop as a means of transit and the possibility of providing suitable landings and connections between these air lines and populous centres, but this, though likely to be much in the public eye, affects the mass of people less than the improvement of existing transit and transport, which is still for two reasons not fully organised. One reason is our heritage of obsolete plant and methods, the other a lack of co-ordination in controls. Our roads, tramways and railways are often competitors, and are consequently often fighting an uneconomic battle where combination would result in an improved system. Take London as an example. It appears as if a great deal could be done in accelerating and simplifying transit by unifying the tubes and the suburban electric lines to a much greater extent than is being done at present. The possibility also of a night shift on these for transport purposes might also be worth investigation. There are other points that arise in connection with this question that have been by no means thoroughly explored, and other cities demand special treatment according to their organisation and physiography. These matters have too often been regarded as outside the range of the Town Planner.

The question of maximum heights for buildings has recently been the subject of rather warm discussions. Now, looked at from an abstract point of view, there is no reason why buildings should not be very much higher than is at present generally accepted in this country, provided that the space around them be proportionately increased, but there are two objections to any material change in an established town; first, the provision of increased open space presents almost insuperable difficulties in view of the vested interests in occupied sites, and, secondly, the period of change would be long drawn out, and during that period the variation in size and scale would be fatal to general harmony and architectural dignity.

Again, we have to remember that many of our members are working in remote parts of the world, confronted with problems very different from those we have at home. Housing, sanitation and traffic present very distinctive features in India and in our tropical colonies. We have to accept a much more economical scale of housing as reasonable where for ten months of the year it is possible, and indeed advantageous, to sleep in the open air, but the established type often leaves much to be desired from the sanitary point of view, and while we struggle to remedy this, the conditions prescribe that our efforts take much simpler and more primitive form than is customary at home. There are numerous endemic and epidemic diseases to be battled with, and the popular view being too often that

these are "Acts of God," a term that even at home is grotesquely made to apply to any untoward happening—we have often an uphill fight to secure sympathy for remedial measures, however obvious and simple these may be. Commercial methods, also, are more primitive and wasteful in time and transport, though in these economic pressure is exercising an increasing influence.

For long the terms "congestion" and "congested areas" have been employed without a very definite idea as to what they represent, and there is an undoubted difficulty in dissociating too dense an occupation of areas from the insanitary conditions that often accompany this. Statistics suggest that a density of more than 70 persons to the acre is detrimental to health, but it is open to question whether this is a reliable figure, and there are a number of factors that ought to be investigated if we are to possess a clear view of the right distribution of the inhabitants of an urban group. Such investigations will, it is intended, form the basis of our discussions during the ensuing session.

The most important thing about a city is that it should be beautiful, and beautiful in a characteristic way, not merely conforming to some adventitious ideal of beauty, but developing a peculiar beauty of its own, based on something belonging to its position and its activities. I have been in many cities and do not know one that does not offer distinctive characteristics which spur the imagination towards making it, not a second-rate imitation of something else, but an entity having a character which might mark it as distinct from others, such as we recognise in every city holding a notable place in the world. It is true that in some places the hints are vague and weak, but they can be found if sought for, and raised to a higher power of expression.

Such an attitude towards a city does not, I maintain, conflict in any way with the logical interpretation of needs; it is a help rather than a hindrance, in that these needs have to a great extent created the character, and our aim is merely to give more intensive and imaginative expression in harmony with the logical development, and the two are so welded together that they reinforce each other and secure consistency in the design as a whole. As in purely architectural design, we cannot have the best without an expression of purpose, so in a town falsified design cannot be good, and the imposition of artificial conceptions, whether grandiose or picturesque, is to be deplored, but no town is so organised that it may not achieve dignity and interest. We still lag behind some other countries in not demanding that the first stages of a scheme shall deal with the city as a whole, and this militates against the possibility of securing a characteristic form of expression such as I have indicated, but year by year general opinion is becoming more favourable to the extension of the idea of city design, and we have every reason to hope that in the not distant future we may have opportunities to employ the knowledge we are acquiring in the broadest and most effective way untrammelled by reservations and exclusions, so that we can set to work to make our cities really fine, really efficient, and really worthy of the highest degree of civilisation within our grasp.

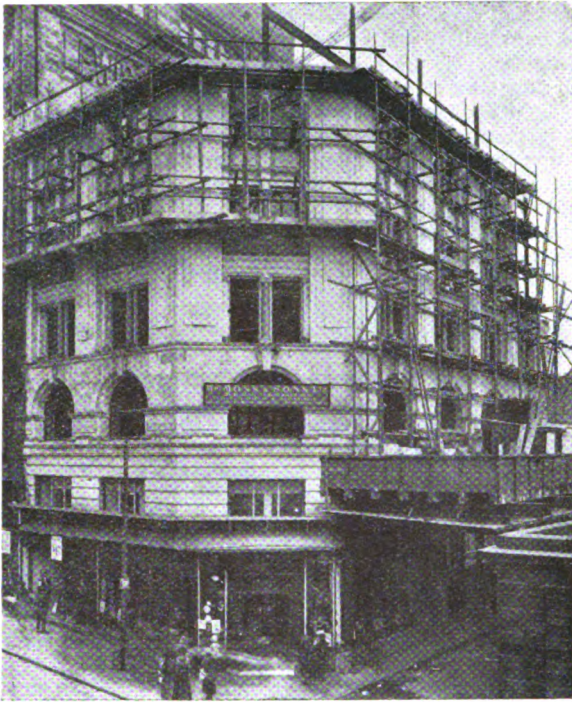
The Institution of Municipal and County Engineers.

On the occasion of the fiftieth anniversary of its foundation, the Institution of Municipal and County Engineers will have a motion on the agenda for its annual general meeting in June or July, 1923, which will have the effect of restricting admission to corporate membership to engineers who possess a professional diploma or certificate, or university degree awarded after examination by some responsible body. This has been commonly required from applicants for associate membership for a considerable time, but it appears to be the general opinion of the profession that the facilities for obtaining certificates in engineering are now such that experience alone should not be held to entitle engineers to claim equality with those who have obtained certificates in addition to experience. The alteration was recommended for adoption in 1923 at the forty-eighth annual general meeting.

As a means of reviving the cement industry of Kent, it has been suggested that English roads, instead of being constructed of macadam, should be made of concrete. Sir Henry Maybury, Chief of the Road Department of the Ministry of Transport, has agreed to meet a deputation, to be introduced by Sir Alex. Richardson, to discuss the question.

The Lincoln Cathedral Repair Fund now amounts to £15,200, and the Ecclesiastical Commissioners, who are the owners of considerable property in the county, have promised £2,500 on condition that £50,000 is raised. The Ecclesiastical Commissioners have also promised a contribution of £10,000 to the Preservation Fund of St. Paul's Cathedral.

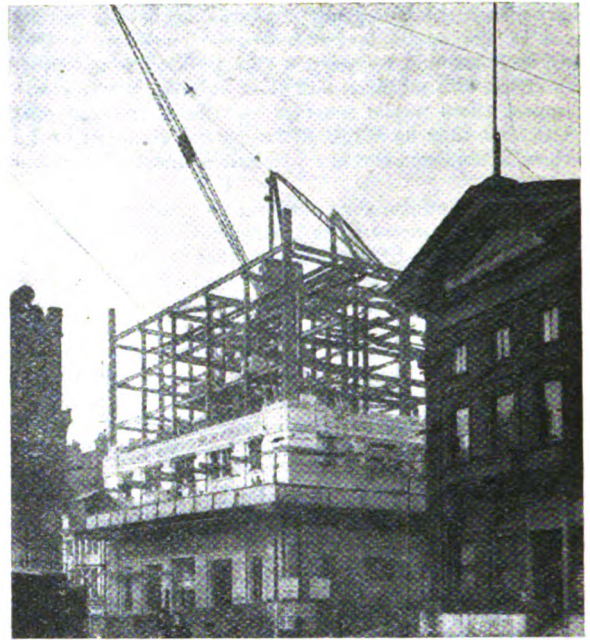
William Moss & Sons, Limited.



EXTENSIONS TO MESSRS. LEWIS'S PREMISES, LIVERPOOL.
Wm. Moss & Sons, Ltd., Building Contractors.

In sport, whenever a veteran enters into competition on equal terms with younger men he is sure of a generous measure of sympathy not only from the spectators but even from his rivals. In business there may not be so much scope for sentiment; yet, even there, most people feel a certain satisfaction at the sight of a long-established firm not merely holding its own but actually forging ahead with all the energy of youth. A half-century or more of experience and good repute is a very real asset—and when allied to enterprise it carries considerable additional weight. Mushroom companies have been, unfortunately, not unknown to the building trade. Architects, who are not more guileless than other men, have sometimes had, when dealing with contractors or subcontractors, painful experience of the difference there may be between achievement and promise. Such failures may not always be due to lack of honesty: lack of capital, lack of experience or lack of courage may equally wreck high hopes. But it is the effect rather than the cause which most concerns architect and client. There is a pleasant sense of security in dealing with a firm which has weathered the storm and profited by the sunshine of many years.

The building industry has its fair share of lusty veterans. On that honourable list, a place must be given to William Moss & Sons, Ltd., for when the business was founded at Loughborough in 1854 it was itself a branch of an older family business. Nevertheless the firm has to-day all the appearance of lusty youth capable of equalling or excelling the best records of even the



NEW PREMISES FOR NATIONAL BANK, LTD., LIVERPOOL.
Wm. Moss & Sons, Ltd., Contractors.

youngest of competitors. The reason is that there has been a judicious infusion of new blood into old veins. The business was converted into a limited company by the three sons of the founder, who took it over from Mr. William Moss thirty years ago—the founder actually died as recently as 1920. These three sons (Messrs. Charles, Alan and Robert Moss) successfully carried on the business till 1919, when it was reorganised, both on account of its continued expansion and for family reasons, by the absorption into the Directorate of some of their more experienced managers. As a result every important branch of the building trade has now its own practical director on the Board.

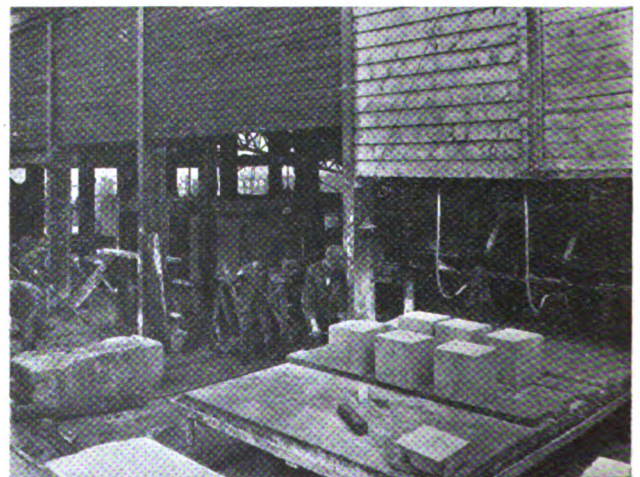
The G.H.Q. of William Moss & Sons is still at Loughborough; but there is a most active Advanced G.H.Q. at Liverpool as well as a third in London which, though at present in its initial stages, may well develop into one of equal importance.

Alike in Liverpool and Loughborough the visitor sees that enterprise and foresight which has enabled the firm to execute, in various parts of the country, many most important contracts of recent years.

To take the northernmost branch first. The local general offices and works are in Roscoe Street, Liverpool. Here is the organisation which has secured such contracts as the new branch of the National Bank and the Nurses Home (each about £70,000), and a big extension to Messrs. Lewis's premises, all in Liverpool, Wallasey Central Hospital, Southport War Memorial, St. Alban's Church, Liscard, the Memorial extension to Stonyhurst College. The firm are in a position to carry out any size of contract in its entirety, from foundation to finish—they have got the plant, they have got the men, they have got the money too! Their

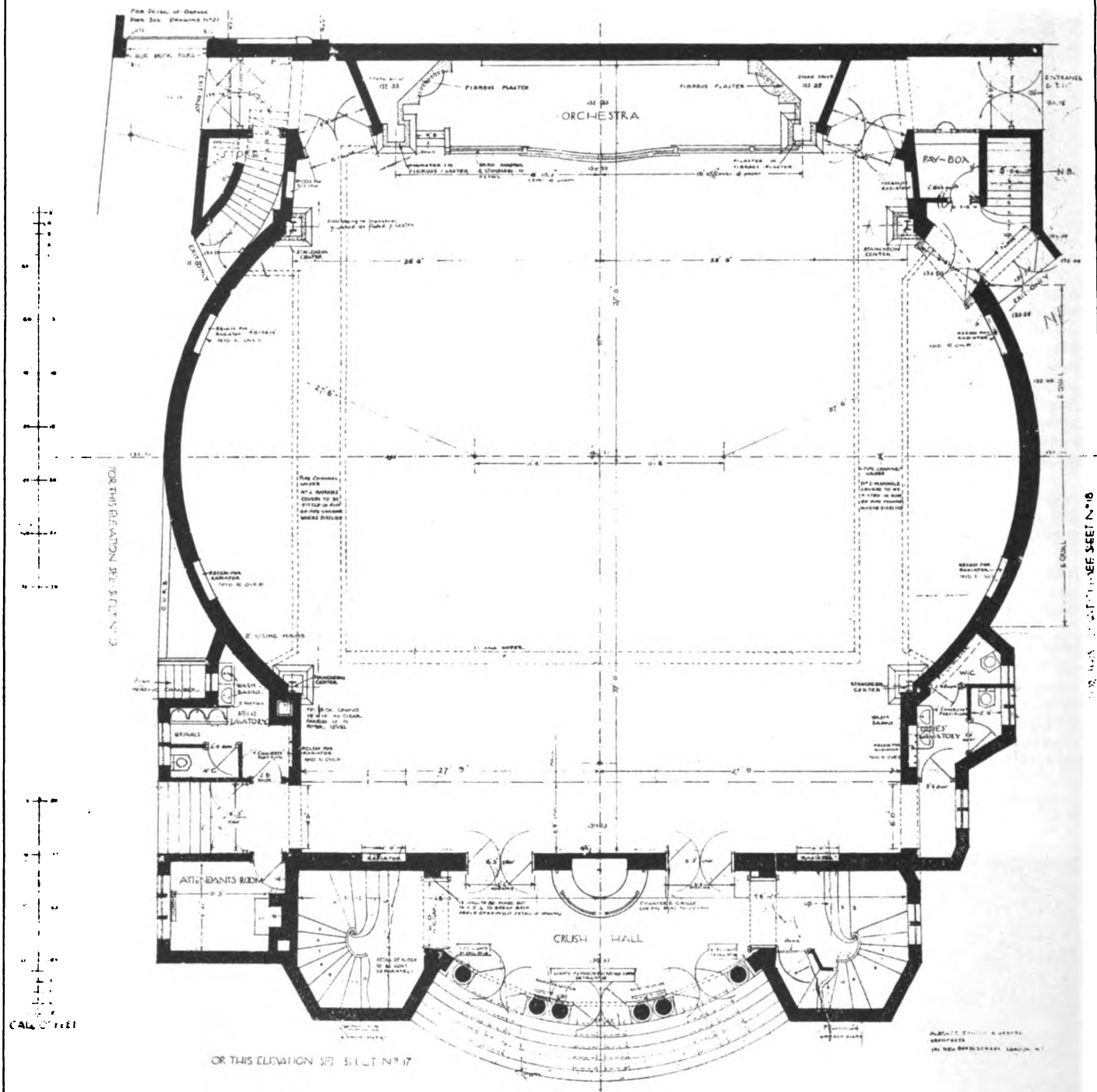


STOCK YARD AT WAVERTREE.

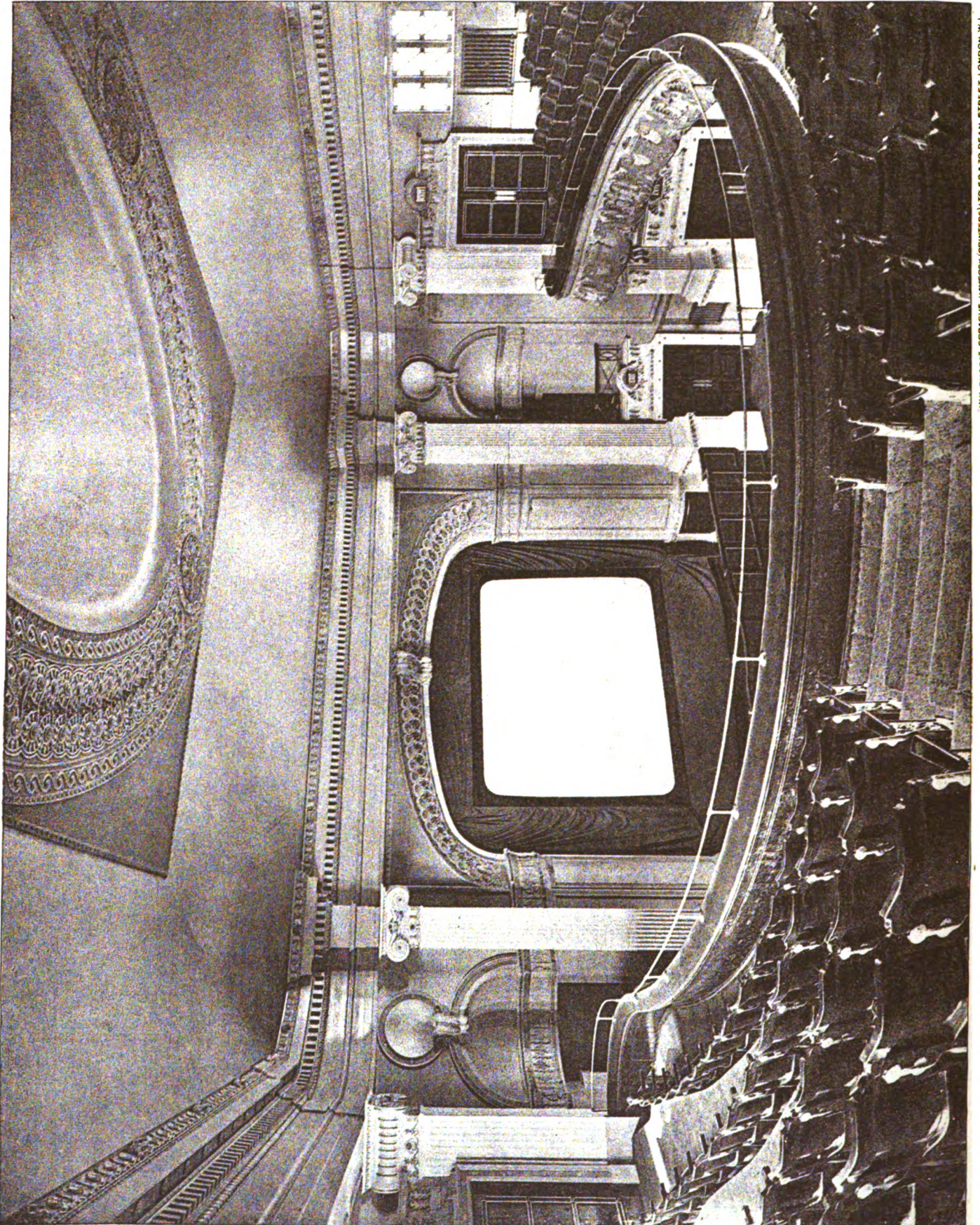


DIAMOND SAW AT WM. MOSS & SONS' STONE YARD,
WAVERTREE.

THE "VICTORY" CINEMA LOUGHBOROUGH · GROUND · PLAN ·



THE ARCHITECT, NOVEMBER 17th, 1922.



VIEW FROM THE GALLERY SHOWING SCREEN AND SINGING GALLERY.
THE VICTORY CINEMA, LOUGHBOROUGH.
ALBERT E. BULLOCK & JEEVES, ARCHITECTS.

"INK PHOTO" SPRAGUE-HAYCOCK (PRINTERS) LTD. 69 & 70, DEAN STREET, LONDON, W.1

THE ARCHITECT, NOVEMBER 17th, 1922.



INK PHOTO SPRAGUE-HAYCOCK (PRINTERS) LTD 69 & 70, DEAN STREET, LONDON, W.1.

EXTERIOR VIEW SHOWING MAIN ENTRANCE.

THE VICTORY CINEMA, LOUGHBOROUGH.

ALBERT E. BULLOCK & JEEVES, ARCHITECTS

THE ARCHITECT, NOVEMBER 17th, 1922.

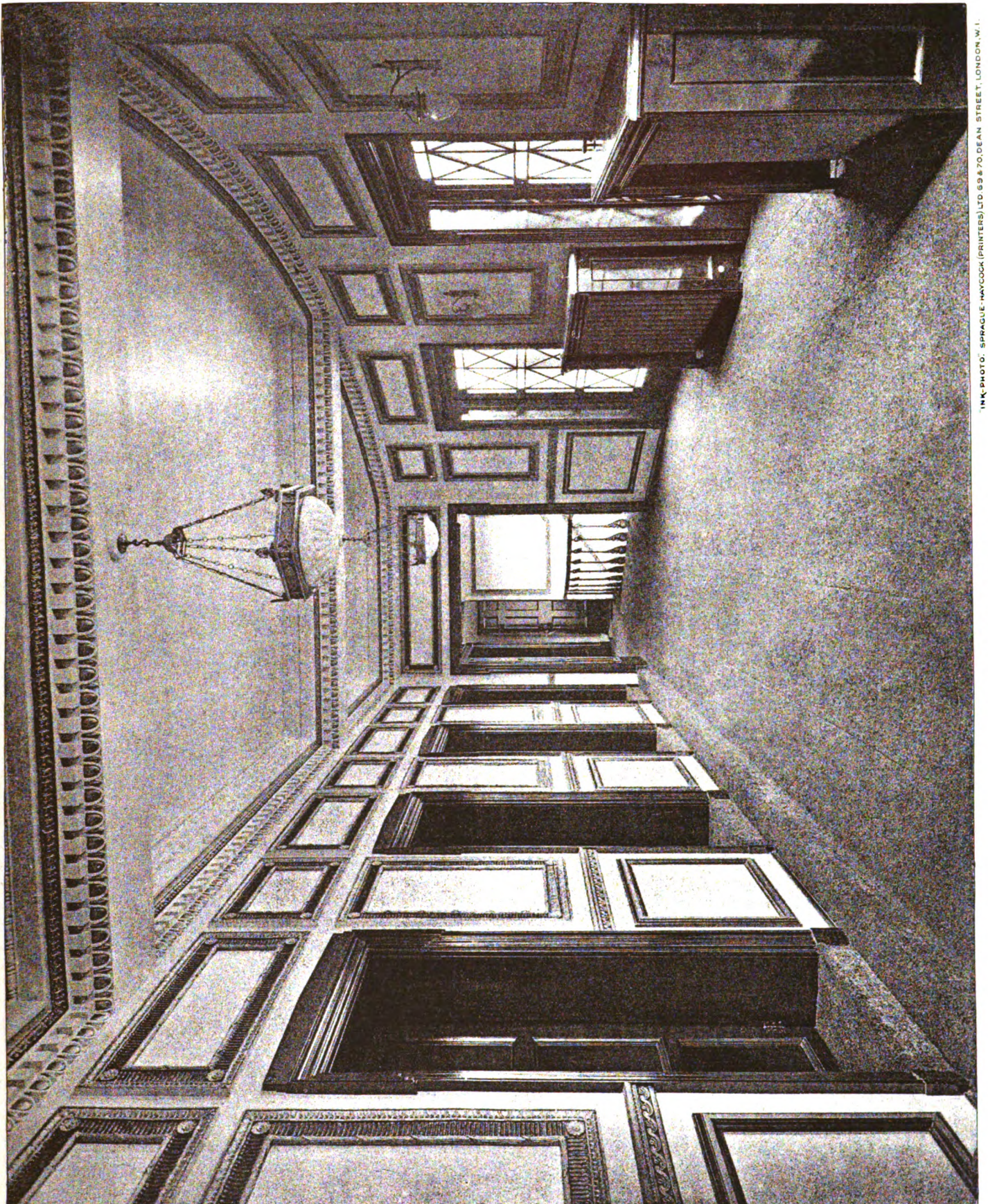


"INK-P4570". SPRAGUE-HAYCOCK (PRINTERS) LTD. 69 & 70, DEAN STREET, LONDON, W.1.

INTERIOR VIEW SHOWING DECORATIVE DETAILS.

THE VICTORY CINEMA, LOUGHBOROUGH.

ALBERT E. BULLOCK & JEEVES, ARCHITECTS.



INK PHOTO. SPRAGUE-HAYCOCK (PRINTERS) LTD. 69 & 70, DEAN STREET, LONDON, W.1.

SHOWING VIEW OF THE FOYER
THE VICTORY CINEMA, LOUGHBOROUGH.
ALBERT E. BULLOCK & JEEVES, ARCHITECTS.



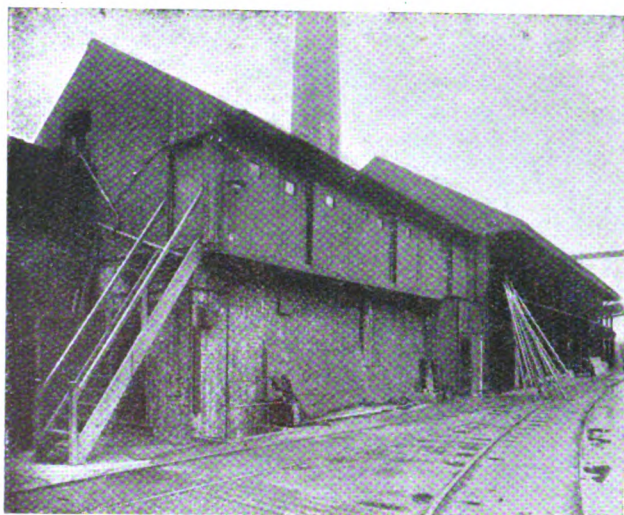


LATHE TURNING COLUMNS AT WM. MOSS & SONS' STONE YARD, WAVERTREE.

methods include the adoption of the best up-to-date ideas both as to appliances and system of supervision. At Lewis's extension, for example, there are three electric cranes continually in use, as well as electric hoists. In their Masonry Department they keep a remarkably detailed system of charts by which the exact position of each contract in hand and of each block of material is indicated day by day.

This Masonry Department is something of a revelation to most visitors, for its equipment will challenge comparison with any yard in the country. Messrs. Moss & Sons entirely reorganised the works some six months ago and were able to introduce the very latest ideas, both as to layout and detail, practically regardless of cost. Situated in Picton Road, Wavertree, the firm possess their own private sidings on the Great Central Railway. Here all the rough stone is brought for working, and after it has been dressed it is loaded up into trucks and despatched to any part of the country. The works are capable of turning out upwards of 1,000 ft. cube per week. Their machinery is of the latest type and includes many appliances not usually seen at masonry works, *e.g.*, a duplex diamond saw (the only one in the district) and lathes for turning out columns of any size, balusters and small pieces. There is also an attachment for doing entasis and fluting on columns which is the firm's own invention, as well as numerous planing machines and saw frames. An exceptionally large stock of different stones is always held so as to be able to cope with any rush order: as stone improves by weathering, this foresight is all to the advantage of clients. The whole of the machinery is worked by electric power generated on the site by special gas engines which also supply the power for lighting and lifting. In direct communication with the shops are the draughtsmen's office and the setting-out departments, both of which have been planned so as to facilitate execution and supervision.

At Loughborough is the general office of the company. Here are the board room, directors' room, drawing offices, estimating and general offices, stores, and all the other departments requisite for a thriving contractor's business. The works are one of the most extensive in the country. They have access by a private siding to the Great Central Railway which greatly facilitates the



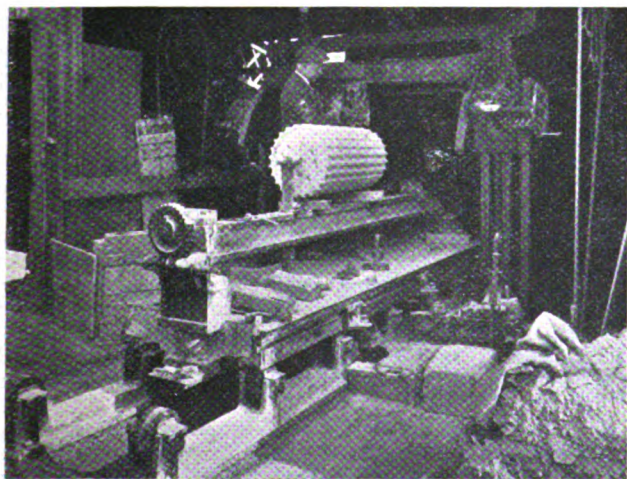
STEAM DRYING STOVES AT LOUGHBOROUGH.

handling of raw material and the delivery of the finished goods. In addition, there is a direct connection with the Trent Navigation Company's canal linking up with the principal Midland towns. Adjoining the fitters' shop is a garage with its fleet of lorries for rapid delivery. The usefulness of motor transport was recently proved in connection with a new church in course of erection at

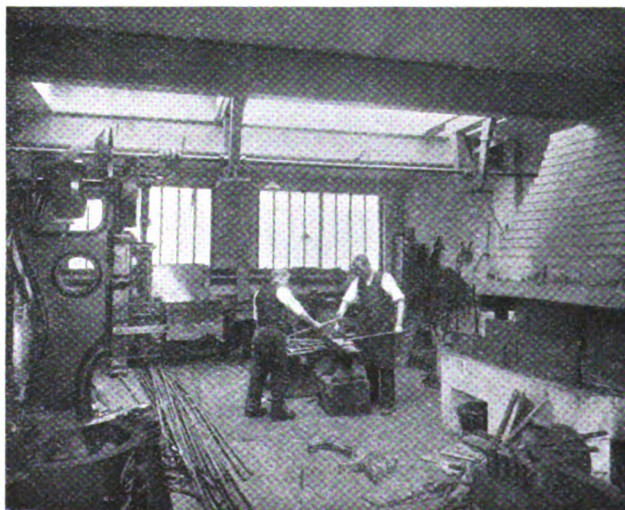


GANTRY AND PRIVATE SIDING AT LOUGHBOROUGH FOR WM. MOSS & SONS, LTD.

Golders Green by Messrs. Moss, when some wooden domes which could not be forwarded by rail were packed into lorries and brought direct to the job, thereby saving a considerable amount of time and making a better job than if they had to be put together on the site. Another valuable appliance, shown in one of our illustrations, is the large gantry with its overhead



SPECIAL ATTACHMENT FOR FLUTING AND ENTASIS TO COLUMNS AT WM. MOSS & SONS' STONE YARD, WAVERTREE.



SMITHY AT LOUGHBOROUGH.



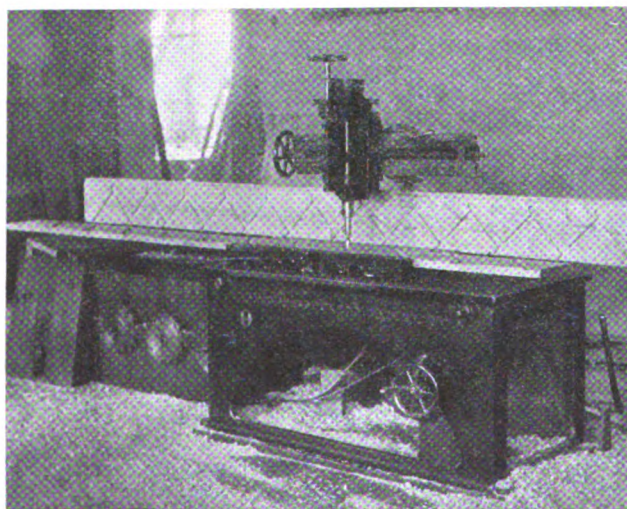
VIEW OF MILL AT LOUGHBOROUGH FOR
WM. MOSS & SONS, LTD.

crane. This is worth mentioning, not only for itself but also because it allows us a passing reference to a by no means unimportant activity of the firm, viz., the ferro-concrete department. The gantry has been erected by them on their own system and has proved economical from the point of view both of original



CORNER OF JOINERS' SHOP AT LOUGHBOROUGH.

outlay and upkeep. Messrs. Moss are ferro-concrete specialists of wide experience. Among their contracts in this department are the Grand Stands at York and Windsor Racecourse; large coal bunkers at Whitehaven, water towers at York for the North Eastern Railway; the Wallasey Town Hall; Leicester



STAIRCASE MACHINE AT LOUGHBOROUGH.

Asylum and Gateshead Asylum. Bridges at York, Braystones (Cumberland), Blairshinock (Scotland), Listowel (Ireland) and Ballycorns (near Dublin). Coal bunkers at Moresby and Sheffield. Pile foundations at York and Chatham.

The mills and works are on thoroughly modern lines, being equipped with extensive plant and high-speed machinery capable of dealing with all classes of work in large quantities. The machines are driven from a lower basement, thus dispensing with overhead belting. The photograph of the staircase machine here given has been selected more or less at random to show how remarkably free each machine stands from the usual impedimenta of overhead shafting and belts—things which are both dangerous and inconvenient. Our photograph also indicates the class of work Messrs. Moss are capable of economically dealing with—usually this part of staircase manufacture has to be executed by the costly method of hand production. The joiners' shop can accommodate from sixty to seventy men, the mill from thirty to forty machinists. An object of particular pride are the extensive drying stoves which are, we understand, of a very unusual kind and are capable of holding considerable quantities of timber and framed joinery before completion. The firm possess their own smithy for dealing with wrought iron and ornamental ironwork, staircases, balustrades and of every other kind of work. There is also a large mechanics' shop fully equipped to cope with all plant repairs.

Apart from building work, Messrs. Moss have had a wide experience in water, sewerage, street making and other public services. Reservoirs have been constructed at Heanor, Horncastle, Hull, Bedford and Barnet. Gas tanks have been erected at Coventry and Dereham; retort houses at Loughborough and refuse destructors at Leicester.

In conclusion we may mention a few of the architects for whom the firm have executed contracts: Messrs. Buckland and Haywood, W. Curtis Green, Joseph & Smithem, H. A. Welsh, Briggs and Thornely, Everard, Son & Pick, C. M. Crickmer, E. Guy Dawber, Horace Field & Simmonds, Walter Tapper, Goddard & Paget, Percy B. Houftton, Geoffrey Lucas, Parker & Unwin, M. H. Baillie Scott, Pepler & Allen, Harrison Townsend, Young & Hall, H. S. East, and Stockdale Harrison & Sons.

The Institution of Sanitary Engineers.

On Wednesday, November 1, the Annual Dinner of this Institution was held at the Holborn Restaurant, when some 100 members and friends attended under the chairmanship of the President of the Institution, Mr. John H. Blizard, M.Inst. C.E., F.R.I.B.A., etc. Amongst others present were Sir Kingsley Wood, Dr. H. T. Calvert, M.B.E., and Mr. E. A. Sandford Fawcett, C.B. (the "three musketeers" of the Ministry of Health), the Presidents of the Municipal and County Engineers, the Society of Engineers and the Society of Architects: Mr. H. C. Shenton, President elect of the Institution of Sanitary Engineers; Mrs. Cloudeley Brereton, Mr. A. J. Martin, past-President; Mr. A. P. I. Cotterell, past-President; Mr. T. J. Moss-Flower, past-President, and Mr. P. N. Hasluck, Secretary. After the dinner, speeches and a short musical programme were sandwiched very successfully.

The toast of the Public Health Authorities, ably proposed by Mr. A. J. Martin, was responded to by Sir Kingsley Wood. Mr. Martin told of a tribe where a custom existed of requiring those who made speeches to stand on one leg the while, thus ensuring (or endeavouring to ensure) against undue length of oratory; Sir Kingsley Wood, however, is apparently an adept at adopting a stork-like attitude. His state of mind was distinctly optimistic; naturally he referred to the moment's scare regarding smallpox, and showed how desirable it is that vaccination should be resorted to. His peroration was the bestowal of his blessing upon the new Minister of Health.

The toast of the evening was proposed by Mr. E. J. Elford, M.Inst.C.E., President Institution of Municipal and County Engineers, who praised the work of the Sanitary Engineers Council in training the young engineer. Mr. Blizard, in acknowledging the last toast, gave a brief résumé of the past year's record, comparing it with statistics of former years, evincing the progressive nature of the Institution; he referred also to the introduction of Health Week, an innovation established under the Presidency of Mr. A. J. Martin. He advocated that parsons should try and instil in their parishioners a love of hygiene.

The Kindred Institutions and the Visitors were subsequently toasted, and we think the palm for a happy reply should be awarded to Mr. T. J. Gueritte, Pres. Soc. Engineers; the other speakers were Messrs. E. J. Sadgrove (Pres. Soc. Architects) and Shenton and Mrs. Brereton.

The Sociological Aspect of Town Planning.*

In the consideration of any rational system of town planning, the first factor to be borne in mind is the sociological one. Other factors demand attention, the highest skill of the technician must be drawn upon right throughout the process, but foremost as well as first must be that human aspect which lifts town planning out of the realm merely of art and science and constitutes it a living, palpitating study of the proper mode of life and the fittest manner in which to give expression to the legitimate aspirations of humanity. It is a truism that one of the most potentially determining factors of human existence is the environment in which the human animal passes its time. Slum conditions will make slum dwellers, and criminal associations will create criminals. It is only the exception where man is superior to his environment. If this be true, it is easily demonstrable that town planning can have in it the most potent germs for human betterment, and just as the evil, haphazard conditions of past generations have resulted in a terrible legacy of ill-health and crime, so the making of sanitary towns, spacious thoroughfares, hygienic homes, beautiful surroundings, and parks and open spaces of real recreative value, shall result in a better standard of inhabitant, and tend, if only gradually, to the ennoblement of the race. The unit of the city is the citizen; and in considering the development of the city, anything which ignores the well-being of the citizen, wonderful and beautiful as it may be, is misplaced energy. Life, for its maintenance depends upon sunlight, air, food, clothing, shelter, and all these, with the possible exception of clothing, are influenced by the method in which the town is planned, and the town planning of new areas can vitally affect each one of them.

There has been a good deal of wordy conflict about the place of the architect and the engineer in town planning. One school has made it an engineer's job of roads and sewers and railways, while the architect has conceived that the hardness of these should be mitigated by the beauty of his art, and that beauty had a distinct place to fill. To my mind, before either of these professions comes upon the scene, and dominating them throughout all their activities, must be the sociologist. The human element must be predominant throughout, if the human result is to be achieved. The city as a place to live in, as a place to work in, as a place to play in, and to worship in, must be more before the minds of its creators than either the city beautiful upon plan, or the city with its perfect engineering acquirements, although these two latter phases must be present to complete the first-named.

The great difference between town planning in this country and the town planning that had gone before it, particularly in France and Germany, is this sociological basis. Formerly we have had schemes of magnificent roads, of beautiful public buildings and wonderful vistas, but many of them were brought into being solely for the aggrandisement of the city or an individual, and many schemes were merely military proposals designed to facilitate the easy transport of troops or to secure dominance over the inhabitants. Thus it has always seemed to me that British Town Planning proposals started from the other end. It was not with the idea solely of making the city more beautiful or more convenient that town planning was here first preached, but because by properly planning the area the home of the worker could be secured in proper surroundings at a reasonable price and accompanied by those amenities of life which go far towards the building up of a better type of manhood.

In this respect I regret that our Town Planning Institute, when breaking fresh ground and creating a new organisation to deal with a new and better condition of things, should not have recognised the sociological side of the movement by admitting sociologists as such as members.

The needs of society collectively and in the individual determine every aspect of our town planning. They settled originally where his dwelling should be. A ford by the river, an easy landing from the sea, a hilltop outpost whence approaching enemies could be discerned, or a strategic retreat in the valleys, a junction of primitive tracks, fixed the first abodes. A collection of houses followed and the hamlet grew to the village and the town and the city, and in the old days where local traditions were followed and local materials employed, before the arrival of our vast problems of engineering, there grew up by degrees the old-world English town, which has not its equal in the whole world.

In the planning of our towns of the future we must take first heed of the human problem. The town must be made healthy, comfortable and convenient, so that the hours of work and leisure may be made of the greatest possible benefit. It goes without saying that our town will be sanitary, that it will be

convenient, and that its factory areas, its shopping areas, its residential areas and its parks shall have been laid out with the greatest regard to convenience and amenity. The history and the tradition of our town will be taken into consideration, for we shall realise that the city has a soul, and unless we are content to create a mere mechanism of roads, houses and shops, and factories, we shall be careful to ensure that not only are the bones of our city clothed with flesh, but that there is an incentive to the growth of a proper civic spirit and a real civic consciousness which marks to-day the difference of an old-world town and the newer London suburbs.

No addition to an existing town should be planned without there first being made an industrial and social census and survey. We must know the kind of trades that have been carried on and are likely to be carried on, and the sort of accommodation each trade requires. We must be careful that the factory area is in right relationship to the residential quarter, and that the means of access between the two are ample. School sites must be carefully located, and public buildings must be not only where they are seen and give a fitting expression to the dignity of the town, but where they will be of the greatest public service. Public open spaces must be distributed with great care. Perhaps more important than the big park is the playing ground, and the allocation of areas, not necessarily large, for children's playgrounds will be one of the most paying investments for any town. A traffic census will be necessary for our road maps, and the grading of the widths of streets and footpaths will receive increasing attention. We must know reasonably where offices will be, and where warehouses, for the footpath which will serve the warehouse district is useless in an office locality, where the roads will be inadequate for warehouses.

Town planning should be an expression of the science of civics, and Professor Geddes has defined civics as applied sociology. Since the industrial evolution converted our rural population into an urban one, with the resulting urbanisation of the great bulk of the population, it becomes more and more important that the urban well-being of our people should be properly studied. There is little need at this stage of progress to go over the old arguments which we so painfully endeavoured to make good some twenty years ago as to the necessity for all the advantages of proper systems of town planning; but, all the same, it is necessary still to keep them in mind. Many local authorities seem to be of opinion that rigorous by-laws will cover a multitude of municipal sins, and that a slight housing scheme here and there is an effective substitute for Town Planning. One great difficulty, indeed, is the definition of what we mean by Town Planning. It may be so little and it may be so much. The construction of main arterial roads and provision for a town's growth in the main services are thought to be enough in some instances, while others are not satisfied until their scheme covers, as did Mr. Ebenezer Howard's proposals for a garden city, practically every factor of human life, or, in short, opening the way to a newer, cleaner, saner method of life, brought into being without any upheaval of existing systems, but merely by the application of common sense to the affairs of municipal life and government.

And the question of definition is not aided by our present law and practice. At the present time we are only planning town extensions, fixing traffic routes, determining the use of land, regulating growth; and, great as is this advance, we have to contemplate something much bigger. In order effectively to house our populations and bring some joy of life to the present slum dwellers, we must, sooner or later, contemplate town re-planning, and be given powers more easily to cut away the festering wens of city life and open up the congested areas. We must be thinking of complete town planning, the building of complete new towns in spots where they ought to be, and we must have country and district planning if our work is to be truly effective. The growing rural areas of to-day are really the places where planning would be really most effective, because it would prevent the indiscriminate urbanisation of still unspoiled countryside, and the time is rapidly approaching when natural forces will compel us to a consideration of the query as to whether a limit must not be placed upon the growth of our towns; whether, in fact, after a certain point has been passed, the continued growth of any town is not a menace to its own health and security.

Here, again, the question of civic importance and justifiable civic pride will largely affect the issue, but at this moment we are considering the needs of society, the well-being of the citizen unit, as being of paramount importance. The cry of "big city" for the sake of "big city," as of "art for art's sake," does not ring true to human experience; big city must only be allowed when it is demonstrably proved that it is going to secure a happier, healthier existence for its humblest citizens than is possible in smaller cities.

I am quite aware of the heresy which, according to many

* A paper prepared for Manchester Conference (1922) by Mr. E. G. Culpin, Town Planning Adviser and Architect.

people, I am here expressing. I know the arguments for the big city from many points of view and can appreciate them: how that your municipal administration is better and cheaper and your services more effective; how that the town must extend its borders so that the burden of rates may be borne by all who benefit from them; how that some institutions and services can only be efficiently supported and carried on by the bigger population; and how the city's trade and commerce would be affected by limitation. But I want to submit also that there is a prior claim to all these, and that even these things could be at least as effectively secured by scientific social planning, although a limit were placed upon expansion. To take the latter point first, and briefly to state and not elaborate my argument, which would then overlap other papers—in a properly preplanned area, belts of park land and cultivated land which separated the units could be so crossed by proper means of transport that each unit would be in close touch with each other and with a common centre—in closer touch, in fact, than some neighbouring districts of our large towns are to-day. But there are other reasons why we should consider whether a limit should not be placed upon the growth of brick and mortar. Is it well that town should be grown into town and absorb town and village with the resulting urbanisation which we see to-day in parts of Lancashire? By driving the open country farther from the dwellers in the centre, are we not depriving them of something very precious, even if it be not properly appreciated by the victims themselves?

And is there not a national aspect of this question as well as a local one? I realise how difficult it is to be impersonal in such matters, and experience on a large local authority makes me sensible of the local appeal. But take the present housing position. None of us is satisfied with it, but a large number of houses have been built and very many more must be built. But where? We have all been putting forward our own schemes and seeking permission to build our tens or hundreds or thousands of houses in our own locality.

Can you not conceive a model state in which there was a real country and regional planning authority which should look at this suggestion from a bigger viewpoint? This authority would examine the housing needs for the whole area, but with this would also consider the necessities of trade and commerce and agriculture. It would consider the agglomeration of population and also the bare tracts of land suitable for development, and it would decide whether Manchester or Bolton or Rochdale was really the best place to increase, or whether national good would not be better served by grouping together some of the new industries required with some of the new houses required and creating afresh upon virgin soil, with none of the evil heritages of the past, a model community, properly planned and properly equipped for the rearing of a race of virile men and women fitter for the realisation of the destinies of the Anglo-Saxon race.

Of course the *reductio ad absurdum* could be applied to this argument, but I am not contemplating that shipbuilding should be transferred to the West Riding or that regional industries should be dislocated. And also I am not blind to the fact that drastic changes would be necessary and that in all probability vested interests would prevent anything so sensible from ever being carried out. What I want to impress is the power which town and regional planning has within itself for affecting the life and happiness of the citizen, and to ask you whether mere local patriotism has the right further to divorce humanity and nature.

In the consideration of such a conception of town planning we shall look for help to those movements which have so largely directed attention to the study of the city; to such societies as, pioneered by the Beautiful Oldham Society, have not ceased to preach the glorious gospel that beauty and the love of beauty are assets of incalculable value, whose loss through the sordid period of industrial expansion has more than anything else lowered the moral fibre of our nation; to the civic survey and the regional survey, which have given us knowledge of the complications and implications of civic life; and to the growing consciousness of educated democracy, determined to leave a heritage of goodwill and opportunity.

Our most monumental examples of town planning have been aristocratic or militaristic; what will the age of democracy have to put in their place? Our planning must be not only for the common people, but of the common people; our future town plan must reflect the highest ideals of the citizen. It is not enough to say that the mass of people do not understand it. That may be said almost of anything, because the mass has never had the opportunity of learning of it. But with saner periods of work and leisure, with increased facilities for education, with better facilities for the right use of leisure, I am optimistic enough to think that a fuller appreciation of these things will come and that my faith in humanity is justified.

Divorced from the sociological, the citizen's basis, town planning may even create evils which will need as much combating as those did whose place they have taken. Napoleon and Haussmann swept away the little houses and little gardens by hundreds and created the magnificent boulevards and avenues which indeed made Paris the attraction not only of France but of the whole world; but it is not certain that in the long run Paris and France may not have to pay a big price for substituting the dusty public expanse for the quiet of the little garden, and the tiny flat, too often sunless and airless, for the small home; and the present symptoms of race decline would appear to bear that out. The magnificent wide streets of German towns, with their imposing buildings flanking the street, are no sort of compensation for the rabbit warren of two-roomed tenements at the back, which social workers know too well, and the exposure of which was the life work of the late Professor Eberstadt.

Education, therefore, is of vital importance. On the technical side this has been well taken in hand, but there is no such strong movement towards the instruction of the citizen. Manchester has been fortunate in that it has had social investigators whose work has been recognised all over the world, and Mr. Marr's *Survey* has been of service not only to workers here, but wherever town planning is spoken of. The root of the matter is, therefore, to be found here. But the first stage of the education of the people will consist largely in such exhibitions as that in connection with which we are gathered to-day.

Here it is that the citizen may see how town planning may impinge upon every phase of his life. Here it is that every class of citizen may find a place in the preparation of the city plan. The city of the past, of the present, and of the future will afford opportunities to the antiquarian, steeped in history and folklore; to the business man and councillor of to-day, filled with enthusiasm for to-day's needs; to the dreamer, the prophet, who shall point the way to a better future.

The pageant of the past, the picture of to-day, the vision of the future are all requisite to a civic education, and to social enthusiasm must be added a knowledge of the town and its working in order to realise that civic consciousness which shall eventuate in the town plan we need. Academic learning alone will not suffice; side by side with it must be progress in the humanities. The citizen must lose himself in the city in order to secure the best for his neighbouring citizens. Public spirit alone will reconcile him to public control, and when the town plan comes along with its "Thou Shalt Nots," he will remember that these are necessary to preserve him from the encroachments of others and not merely a check upon his liberty.

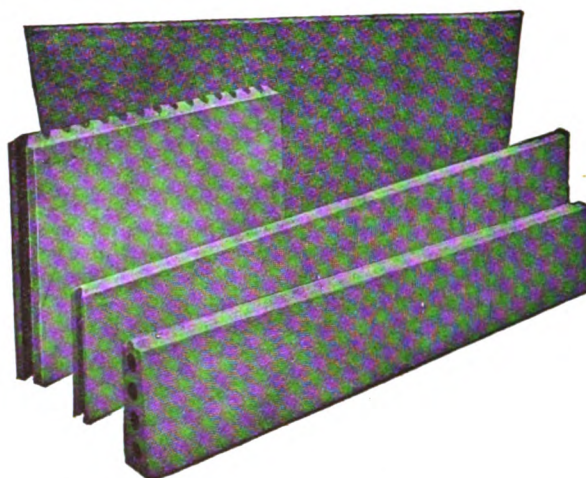
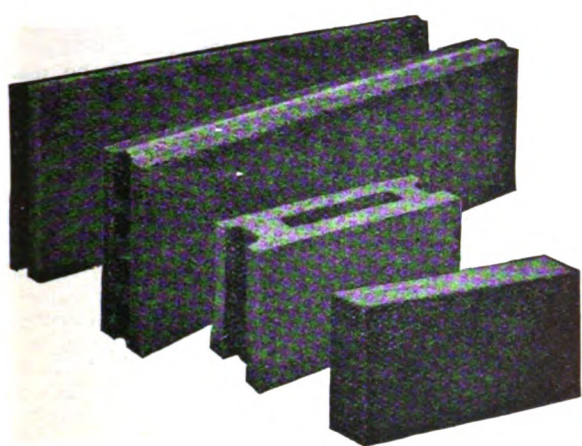
Every force must be mobilised, and all forces must be co-ordinated. In the case of an army in the field the value of each unit is realised and the supreme importance of concerted action is known. We are met here in support of a campaign against foes as subtle and as powerful as any our armies meet in the field. With a vision of potentialities such as I have outlined, there is a call to all men and women of goodwill to take part in this conflict. It is a work all may be proud to join in, and for which the best intellects are not too good.

Disease, dirt, inconvenience, ugliness and danger have made town life a fight against odds. The vital statistics of every town show how the better planned areas escape the toll of death and disease which is the lot of the congested centre. If every healthy citizen is of value to the country—and we are forcibly reminded of that when there is a call to arms—can we afford the wastage of to-day and the wastage which may go on if our schemes are not socially sound?

The present ill-named passion for economy is likely to defer town planning proposals in some areas where a short-sighted policy prevails. It is the long view that is required in town planning, and there is no civic improvement which can be obtained at so little cost. Indeed, it is doubtful whether the expenditure can be reckoned as a cost; it is an insurance policy, it is an investment whose dividends of solid value will grow greater and greater as time goes on.

After the wastage of a great war human life is of the greatest value, and it is of primal importance to see that this life is given the opportunities to develop to the highest standard of efficiency. Science is ever leading us into new fields of discovery; the demands upon human energy become more and more insistent; your up-to-date manufacturer does not hesitate in face of improvements to scrap the whole of his costly machinery; shall we, face to face with incontrovertible facts as to the dangers of the past and the possibilities of the future, hesitate to scrap our preconceived notions? Shall we not determine that while we are spending vast sums on sanitation we will ensure the most perfect sanitary system, and while we are spending vast sums on education we will provide surroundings that education may be best assimilated and best used for the service of the nation?

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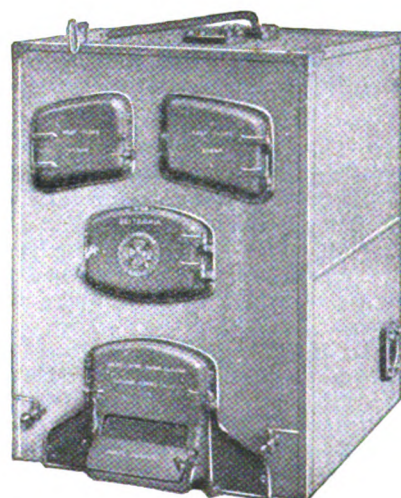
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London County Council.

NEW COUNTY HALL.

Expenditure totalling £75,000 was sanctioned at this week's meeting of the London County Council for construction of the raft foundation of the final wing of the new County Hall, Westminster Bridge. In February last the Council estimated that the cost of this wing would be well over a million pounds, but to-day it is anticipated that the whole of the work can be completed for £800,000.

Temporary protective works were installed when the present incomplete raft was constructed eleven years ago, but continuous pumping has since been necessary to preserve the structure. The only effective remedy is completion of the foundation, as originally intended. No decision has yet been reached regarding the erection of the superstructure.

SMOKE NUISANCE IN LONDON.

Replying to Sir E. Bonham Carter, who asked what use was being made of the Council's powers in regard to abatement of smoke nuisance in London, Mr. Sanger (Chairman of the Public Control Committee) said the Council was empowered to spend £500 a year in making experiments and investigations. This power was obtained in order to facilitate improvements in the various methods of consuming fuel for industrial and other purposes. The Fuel Research Board was experimenting in this direction and publishing the results of their inquiries. From 1914 onwards the whole subject was investigated by Departmental Committees, and the Public Control Committee of the Council had not considered it desirable to spend money in investigations beyond making systematic inquiry as to the soot deposit over London. The Committee had carefully considered the recommendation of Lord Newton's Committee that "the Government should encourage the co-ordination of research into domestic heating generally," but as defects in domestic chimneys were common to the whole country, research in that direction appeared to be a matter for the Government and not the London County Council.

VISITS TO THE COUNTY HALL.

At last week's meeting of the London County Council the question of granting permission for the public to inspect the new County Hall was discussed. The Establishment Committee made a recommendation to the effect that permission should be given for visits to the principal floor and to other portions of the building not used as offices by parties conducted by members of the Council at any time when the building is open; to individuals or parties representing Government Departments, municipal authorities, or professional societies at any time when the building is open or on Saturday afternoons, in accordance with such rules as may be prescribed; and to organised parties of visitors not included in the above rules on Saturday afternoons. In the course of the discussion several members objected to the rules on the ground that the public should have the same opportunity of going through the building as they had of visiting the Houses of Parliament and Westminster Abbey, and Mr. H. J. Greenwood (chairman of the committee), who said there was no intention to prevent ratepayers seeing the building, agreed to take back the recommendation.

General.

Sir Arthur Boscawen, speaking at Coventry last week, said that as Health Minister his housing policy would be to return as quickly as possible to private enterprise.

Mr. T. B. Hunter, Superintending Civil Engineer to the Admiralty, recommends the extension of the Red Pier at Douglas by the use of reinforced concrete piles at a probable cost of £225,000.

At the R.I.B.A. meeting last week the President drew attention to the prints lying on the table and presented to the Royal Institute by Mr. E. H. New, of Oxford, in recognition of his election as an Hon. Associate.

Mr. Harry Louis Tacon, of the firm of Messrs. Tacon and Son, architects, Rotherham, died at his residence in Harrogate, on Sunday, after a protracted illness, aged 76 years. He retired from active participation in the business eleven years ago.

The Branch Partnership formerly existing between Mr. Harold B. Moss and Mr. Richard Anderton, A.R.I.B.A., at 20 Birley Street, Blackpool, has been dissolved as and from September 30, 1922, and Mr. Anderton now has offices at 18 Winckley Street, Preston, and at 15 Hill Street, Blackpool.

The Council of the University, Sheffield, are about to appoint a Lecturer in Architecture at a salary of £500 per annum. The Lecturer will have the right to practise under certain conditions. Applications should reach the Registrar, from whom further particulars may be obtained, by November 22.

An invitation has been received from the Executive Council of the British Empire Exhibition for members of the R.I.B.A. to visit the Exhibition grounds at Wembley and to inspect the various buildings now in course of construction there. Members and Licentiates may apply to the Secretary R.I.B.A. for tickets of admission, which will enable them to visit the Exhibition at their own convenience. There are frequent trains from Baker Street and Marylebone Stations.

At a meeting of the Associates' Committee, held at the Royal Institute of British Architects in October, 1922, it was agreed that: "Having regard to the fact that the Main Committee on Unification and Registration had been dissolved, no useful purpose would be served by the continuance of the Associates' Committee, and that it should therefore notify the general body of Associates, by whom it was appointed, of its dissolution, and inform them at the same time that the results of the Committee's labours could be seen on application to the Secretary R.I.B.A."

The Tablet which has been erected at 9, Conduit Street, W., in memory of the 232 members and students of the Royal Institute of British Architects who laid down their lives in the Great War, will be unveiled by the Earl of Crawford and Balcarres, Honorary Fellow of the R.I.B.A., on Monday, November 20, at 3 p.m. The Tablet was designed by Mr. Trenwith Wills, A.R.I.B.A., who was successful in the competition limited to ex-Service members and students, which was held last year. The dedication ceremony will be performed by the Rev. F. N. Thicknesse, Rector of St. George's, Hanover Square, in whose parish the R.I.B.A. has had its home for more than sixty years.

The Ministry of Health announces that the tribunal appointed under the Local Authorities (Assisted Housing Schemes) Regulations, 1919, to settle differences of opinion that might arise between the Minister of Health and local authorities on matters involved in determining the amount of Exchequer subsidy payable, has been reconstituted as follows:—Chairman: Sir Theodore Chambers, K.B.E. Members: Sir Alfred Gelder, F.R.I.B.A. (nominated by the Association of Municipal Corporations); Mr. John Bond, O.B.E. (nominated by the Urban District Councils Association); Lieutenant-Colonel Seymour Williams (nominated by the Rural District Councils Association); Sir Edwin Savill, F.S.I., and Sir John Henry, J.P. (nominated by the Minister of Health). Since the tribunal was set up, states the Ministry of Health, it has made 49 awards, and has spent much time in visiting the districts of local authorities in various parts of England and Wales, inspecting houses built under the assisted housing scheme, and investigating other factors relevant to the making of impartial decisions. The members of the tribunal, working in an honorary capacity, have carried out very valuable services.

Trade Notes.

The Mayor of Hastings, on the 8th inst., opened the extension to the Corporation Electricity Works. The whole of the constructional steelwork and fire-resisting flooring on the "Mon'litherete" system was supplied and fixed by the Fawcett Construction Co., Ltd., of Westminster.

Architects of to-day may be interested to see copies of "The Architect" of upwards of fifty years ago. Particulars are in our advertisement columns or can be had from Crow Carrying Co., Ltd., Barking.

Cuirass Products, Ltd., 69, Victoria Street, Westminster, S.W., have put a new line on the market, namely eighteen distinct shades of wood preservatives and stains, which are manufactured from a creosote base. Among the special claims for them are that they can be immediately varnished, painted, or French polished without any undercoating being necessary, that they render timber absolutely impervious to water as well as to dry rot and decay. The prices are remarkably moderate.

W. P. Butterfield, Ltd., Shipley, the galvanised tank and cistern manufacturers, invite the attention of buyers to their new improved dust bin, with its vertical corrugation, which has been designed to overcome the secretion of refuse usual in the horizontal corrugations, and which in addition has a stronger appearance. This bin is being adopted by Corporations and Councils very extensively. Should any reader of this Journal be interested, Messrs. Butterfield will gladly supply samples for inspection, and quote to-day's lowest prices.

Messrs. Allsop & Co., auctioneers, 141 Park Road, N.W.8, and 15 Soho Square, W.1, inform us that the sale by auction of the valuable freehold building site, just off High Street, St. John's Wood, which was originally advertised to take place on November 15, will take place at the London Auction Mart (Room H), 155 Queen Victoria Street, E.C., on December 12, at 2.30 p.m. The site has about 34 feet frontage and 82 feet depth and would be suitable for a small block of flats or cinema.

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The Outlook.

Few of our industries have greater reason to rejoice at the outcome of the elections than the building trade, for many disturbing factors have now been eliminated. We know that no new State housing scheme will be introduced, while we have every hope that the last vestiges of State interference with property—the Rent Restriction Act—is likely to disappear in the near future, for though no definite pledge has been given, the general pledge to leave industries to work out their own salvation covers this item. Patient husbandry of the national resources rather than the search for “rare and refreshing fruits” is likely to be the order of the day, and though it will be long before we can get rid of any of the heavy burdens which have been unnecessarily cast on our shoulders during the last seventeen years, we may rest assured that their weight will be diminished rather than increased.

The fear expressed in many quarters at the obvious growth of political Labour may be too much exaggerated. In the first place its successes are very nearly contemporaneous with the areas of the great coal-fields, and we know the discontent and unrest which has prevailed in those areas both during the war and in the subsequent period when the industry was reverting to more normal conditions, while we also know that if the strictly limited and reduced profits of the owners were eliminated altogether the workers would be little better off. With the price of coal at its present figure it is impossible to see where relief is to come from. A small industry can be subsidised by the State wisely or unwisely, but it should only require a little clear thought to convince the workers that a great industry like mining must stand on its own resources. We suggest for the above reasons that the success of Labour is partly due to local and special circumstances which may not necessarily reoccur. We are told by some that the result of the elections show that a majority may be returned by a minority vote, and is therefore unstable, and this is an assertion that is easily made, but it is clearly possible that a system of second ballots would have resulted in confirming the results of the first ballots by greater majorities. Be this as it may, we believe the great desire of the majority of our countrymen is to be left alone, and to have their efforts as little handicapped as possible by the weight of taxation and cost of administration, and the aim of the new Government is to give effect to that wish.

During the closing decades of last century and the early years of the present one we had a great outburst of municipal activity in building shown in the erection of municipal buildings, libraries, technical schools, swimming baths, and other buildings, with the result that a large proportion of our towns are now provided with all the accommodation they need for their various activities. The relatively low cost of building and the ease with which loans could be secured made all this activity possible, but the situation is altogether a different one to-day. Education authorities have been postponing building schemes because of their cost, and the latest policy of educational reformers in the

direction of cutting down the sizes of class-rooms has been largely abandoned or delayed for financial reasons. It has been proved by actual experience and not by theoretical considerations that we cannot replace housing as it was carried out before 1909 by any other system than the one which provided the people with what was necessary at a very cheap rate. All that housing reform has done is to provide certain improved types which are likely to be partially followed when private enterprise again enters the field.

The building that remains after these various categories have been considered is that which is carried out by architects for private employers, and it is evident that this must for many years constitute by far the most important field for the architect and contractor, and if this is so they have a clear reason to favour a regime under which they are likely to be able to work most freely and successfully.

Some among our ranks advocate the relaxation and reform of local bye-laws as a means to the end of cheaper, and therefore more plentiful building, but examination of the points usually urged has convinced us that there is little which is unreasonable in the average local bye-laws excepting some of the regulations as to the height of rooms and the proportion of floor and ceiling. Some of the relaxations permitted by the Ministry of Health were reasonable, others hardly made for sound building, but in the main we cannot expect much relief in this direction. On the other hand, there is, we think, room for amendments in the numerous Acts relating to building in London, and possibly other of our greater towns. As far as London goes this is already being dealt with.

At different times in the last few years we have had new systems of building brought forward, the object of which has been to save cost, but few if any of them have given us reason to believe that we could do better by the abandonment of time-honoured methods. The cost of building, like that of many other things, seems likely to become stabilised at nearly 100 per cent. over pre-war costs, and a full resumption of building activity is unlikely before the public realise this and cease hoping for what is most unlikely, if not impossible. In any case we are now relieved of the whole machinery of control of materials and labour, so that the readings of the thermometer of prices may be relied upon. The after results of war are likely to be evidenced in building as they were a hundred years ago, after the Napoleonic era, which was followed by a period of high costs and consequently simple and economical building, which was the prelude to the great industrial era of the nineteenth century.

If we cannot for reasons of finance carry out great immediate improvements in our towns, we can by adopting wise and well thought out schemes secure their good and orderly development; if we cannot cover the surface of the country with new and beautiful houses, we can, at least, by making use of the Housing and Town Planning Act, prevent the destruction of beautiful localities.

Our Illustrations.

CORY BUILDINGS, FENCHURCH STREET, E.C.



TYPICAL CORRIDORS.

Cory Buildings, Fenchurch Street, C.E.

This building, which has just been erected for Messrs. Wm. Cory & Son, Ltd., occupies the site of the old Ironmongers' Hall. Messrs. Cory themselves occupy the whole of the basement, ground, first, fourth, and sixth floors; the second, third, and fifth floors will be let off as offices to other firms.

The late Mr. Edgar Stones designed and commenced the building, but he died while it was still in carcass, and before the two upper floors were built. Mr. E. Douglas Selway, A.R.I.B.A., was then appointed Architect, with Mr. W. Gillbee Scott, F.R.I.B.A., as Consulting Architect; but Mr. Selway's health completely breaking down a few months afterwards, the completion of the building was placed solely in the hands of Mr. Gillbee Scott.

The building is finished in a very complete manner, and contains all the fittings and equipments which characterise modern office buildings of the highest class. G.P.O. telephones and relay automatic telephones are installed in every room, and each room has an electric clock synchronised from Greenwich.

The contractors for the foundations and basement were Messrs. Holloway Bros., and those for the whole of the superstructure were Messrs. P. & W. Anderson, of Glasgow and London.

The building is of steel frame construction by Messrs. E. C. & J. Keay, of Birmingham, Messrs. Whitaker Hall & Owen being the consulting engineers.

The floors, roofs, and staircases are constructed of reinforced concrete by the Fawcett Construction Co.

The front, and part of the Fishmonger Alley elevation, are in Portland stone, and all the remaining external walls are faced with white glazed bricks. The roofs are covered with green Westmoreland slates, and all the flats are laid with asphalt.

The walls of the Entrance Hall, staircases up to the second floor, General Office, and first floor corridors are lined with various marbles. The floor of the Entrance Hall, and the treads and risers of stairs are also of marble. The floors of the corridors are of marble mosaic and terrazzo, and those of the offices throughout are of oak.

The Board Room is carried out in the style of the William and Mary period. The walls are panelled in richly grained walnut in quartered panels, with a capping carved in leaves and flowers taken from an old moulding of the period. The chimney-pieces are in Pavanazzo and Irish green marble. The grates are reproduced in oxydised silver from an old model and are fitted with Berry's "Magicoal" electric fires. The electric light fittings are of carved walnut relieved with old gold, and are also based

on old examples. The whole of the work in this room has been admirably executed by Messrs. Waring & Gillow, Ltd., who also executed the whole of the furniture in the style of the period, as well as all the furniture for Messrs. Cory's offices. The clock is an old grandfather clock, in walnut: its original dial has been retained, but the movement has been taken out and replaced by a synchronised movement, which is now the master clock for the whole building.

Messrs. Samuel Elliott & Sons (Reading), Ltd., were responsible for the whole of the Spanish mahogany joinery and panelling on the ground and first floors, including the carving to the overdoors and entrances. The work of the panelling is contained in thirteen offices, which comprise:—Five Directors' rooms, General Offices, Secretary's room, and other portions of the building, and consists of framing and raised quarter veneered panels of selected figured Spanish wood, surmounted with cornices. The rest of the joinery throughout is in Honduras mahogany, and has been executed by the general contractors.

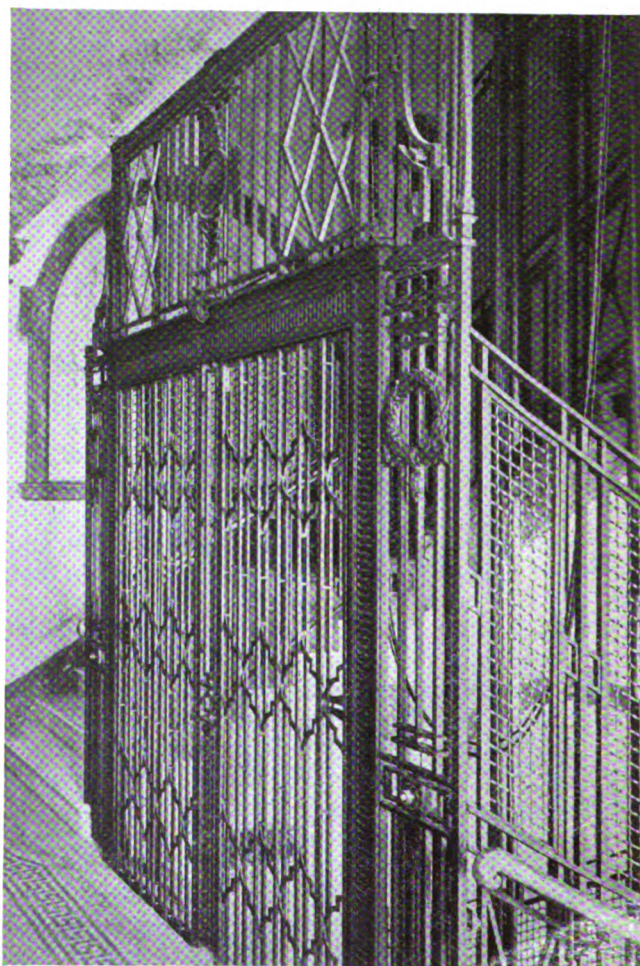
The bronze entrance doors, bronze dwarf window screens, bronze name plates, and the ornamental iron window frames in front have been executed by Messrs. Hart, Son, Peard & Co.

The iron dome over the General Office, the balustrading to the galleries, the lift enclosures, bronze handrails, and bronze grilles to the radiators have been executed by Messrs. H. W. Cashmore & Co.

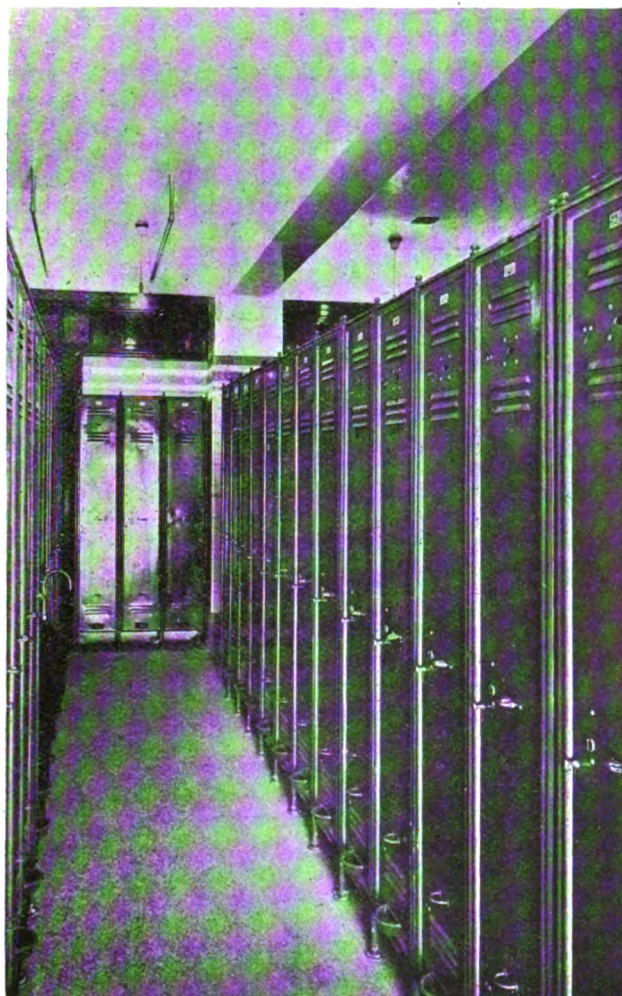
The paving to the ground and first floors was carried out by the Art Pavements & Decorations, Ltd., in Roman marble cube mosaic, whilst on all the remaining floors the corridors were laid with terrazzo with Roman marble border. In every case the floors have been panelled to correspond with the wall pilasters.

The metal work of the electric light fixtures supplied by the Edison Swan Electric Co., Ltd., was finished in old bronze colour to match the various other metal work in the building. The glass bowls are their Luna type of bowl, which is being fitted in several other important buildings in the city of London, including the Bank of Taiwan, the National Provincial Bank of Ireland, the Union Castle offices, and the National Provincial Bank of England, Whitecross Street.

Messrs. Sankey-Sheldon supplied a complete installation of ball bearing steel filing cabinets, steel drawing and plan filing



WROUGHT IRON LIFT ENCLOSURE—CORY BUILDINGS.



STAFF LOCKERS IN BASEMENT.

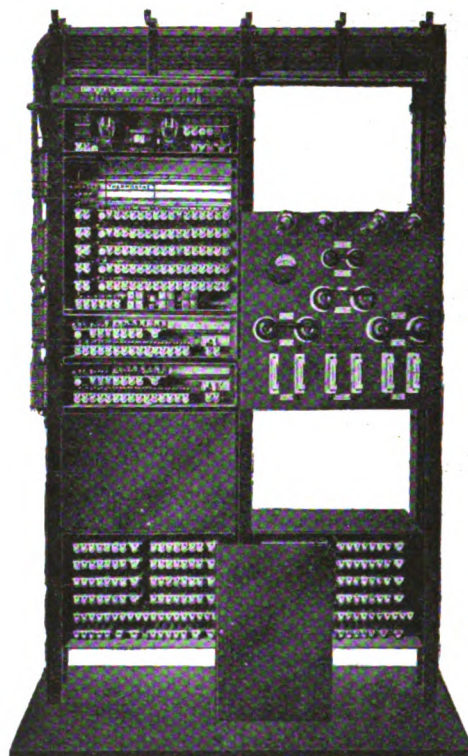
and two wires only are used between the instrument and the switchboard. This should be compared with the old-fashioned inter-communication system, in which every instrument carries its own batteries and also has attached to it a cable containing 5 to 30 wires. Two other special features are that in the "Relay" system clear transmission is obtained, and also that a caller is able to connect and disconnect practically instantaneously. Furthermore, the installation can be readily added to in multiples of 10 lines, without disturbing the existing service. In addition to the economy effected in operators' salaries, the efficiency that results from having such a perfect telephone service will well repay the initial outlay.

The building is supplied with water from a well about 450 feet deep, sunk by Messrs. C. Isler & Co.

The following firms have executed various finishings:—

Messrs. James Gibbons, Ltd., all the ironmongery, as well as the staff lockers in basement; "Citex" Fire Extinguisher Co., the fire extinguishers; Messrs. Hollis Bros., oak flooring; Messrs. Fenning & Co., all marble work; Messrs. E. J. & A. T. Bradford, the stone carving and fibrous plaster ceilings and cornices; Messrs. George Wright, Ltd., all grates and chimney-pieces, except in the Board Room; Luxfer Prism Co. and Mr. Wm. Smith, leaded glazing; Messrs. Joseph Chater & Sons, electro-copper fire-resisting glazing; Messrs. Waygood-Otis, Ltd., lifts; Messrs. Rosser & Russell, low-pressure heating; Electrical Installations, Ltd., electric lighting; Edison Swan Electric Co. and the General Electric Co., electric light fittings, except those in the Board Room, which are by Messrs. Waring & Gillow; Electrical Contracts & Maintenance Co., the wiring for the electric clocks; The Synchronome Co., electric clocks; Messrs. C. W. Williams & Co., tile dadoes to staircases and corridors; Messrs. Hobbs Hart & Co., provided the strong room doors and gates. The blinds are by Messrs. John Hull & Sons.

Messrs. Young & Brown were the quantity surveyors, and Mr. J. G. Peacock the clerk of works.



Whalley Abbey, built by the Cistercian monks in the thirteenth century, has been purchased by the Finance Board of the Manchester Diocese for the Church of England. The Abbot's House, cloisters, and other buildings are in an excellent state of preservation, and may be converted into a residence for the new Bishop of Blackburn, a Conference House, and a Theological College. Some months ago the monks' dormitory was purchased by Roman Catholics for use as a church.

The Walsall Town Council on the 13th inst. accepted the tender of the Unit Construction Company, Ltd., Birmingham, for building 39 houses at a total cost of £12,723, the prices per house ranging from £324 to £333. It was stated that the Council had practically finished building by direct labour, and in future the work would be done by contract. The plant which had been used by the borough surveyor's department will be utilised in connection with school repair work, etc.

cabinets, steel sectional bookcases, steel unit cupboards, steel stationery cupboards, equipment for handling documents and insurance policies, etc. Steel shelving was provided in the strong room and stationery room—the adjustment in each case being possible by inches. All shelves are fitted with label-holders. The special feature of this Sankey-Sheldon shelving is that though the fabric is not disturbed in any way, yet each individual stack stands perfectly rigid. When Messrs. Cory placed their order with Messrs. Sankey-Sheldon it was specified that, with the exception of the shelving, all the steel equipment, from filing cabinets to waste paper baskets, should be of mahogany grain finish. It has been found possible to obtain an effect which almost exactly matches the general woodwork scheme, and at the same time presenting a surface of perfect durability capable of withstanding the roughest use.

The extensive marble work supplied and fixed by Messrs. Fenning and Co., in these buildings comprises the decoration of the entrance hall, general office (ground floor and gallery), main and secondary staircases, and first floor corridors. The marbles employed are Grey St. Edouard in skirtings and caps, arches and panelled piers, and the wall panelling throughout is in Piastraccia, with second statuary moulded surrounds. The ceiling beams throughout are in Piastraccia marble, moulded and panelled, and this marble is also employed for the entablature around the general office, with grey cornice. The scheme displays very effectively the decorative effect of the marbles used, the opened out panels on the walls in Piastraccia having a very pleasing effect.

One of the features in the building is the telephone service, the whole of the premises being fitted up with "Relay" Automatic Telephones, which are manufactured by the Relay Automatic Telephone Company, Ltd., of Marconi House. As far as calls between departments are concerned, the human operator is entirely dispensed with, and instead of the user having to wait his turn while the operator is connecting calls from other departments or from the Public Exchange, he simply moves a dial to the number required and effects a connection to any instrument throughout the building within 4 seconds. There is also the very important advantage that with this system conversation cannot be overheard and it is impossible for any "listening in" to occur. The "Relay" system is worked by means of a central automatic switchboard, similar to that shown in our sketch,

Notes and Comments.

The Building Guild.

We are sorry to hear that, on the application of a Manchester bank, a receiver has been appointed as receiver and manager of the Guild. It is claimed by the latter that their books show a balance of over £30,000 to their credit, and that their financial position is owing to the non-payment of money which is due to them. It is further stated that at Newcastle work they are carrying out for the Corporation will probably have to be taken over and completed by that body. An effort to raise the necessary money from the levy voted by the Building Trade Operatives produced some £11,000, an insufficient amount to tide them over their difficulties. We hope that matters may yet be satisfactorily adjusted; but it must be remembered that at the least of an ordinary contractor's difficulties is to secure moderately prompt payment for the work he does and the Guild are only up against a very common difficulty which has frequently brought about the bankruptcy of many private businesses which were both well organised and administered. Out of evil may come some good, and it is perhaps well that the members of the Guild should be shown some of the inseparable difficulties attending management and control of what are initially financial operations.

Exotic Architecture.

"The Times" illustrates the new buildings now being erected from the designs of Mr. B. R. Hebblethwaite, A.R.I.B.A., for the Egyptian Parliament, at a cost of £E.75,000. The drawings, we are told, have been entirely prepared in the office of the Architectural Office of the State Building Department. Even with this strong recommendation, our impression of the design is not an entirely favourable one, but we feel curiosity about it as we read that: "The general style of the exterior is based on that of the French Louis XVI period," but "some of the decorations of the building will be adopted from the ancient Egyptian style." We feel somewhat dubious about the architect's ability to satisfactorily combine the Louis XVI style with that of ancient Egypt, and do not quite know whether France or Egypt will suffer most from the very fearful venture. We have, however, the consolation that Egypt and not England will pay for this truly awful conglomeration of discordant elements. We are assuming that the statements given above are true in fact.

Bricklayers and Housing.

At a time when the new Government will be expected to make some announcement as to their attitude on housing, and Labour will have much to say, the following letter appears in "The Times":—

In this part of the country, when the efforts to provide houses were most strenuous, bricklayers secured three times the pre-war wage, and, under the direction of their union, reduced their output to one-third. This means that every house built took three times as long, and cost nine times as much as before. The following are amongst the trades which would have immediately benefited by a resumption of the previous rate of work: Plasterers, slaters, painters, brick and stone works, haulage (both rail and road), mining, iron and steel works, house furnishing, etc., etc. Employment, instead of doles, would have spread throughout the country, and the heart-breaking dearth of houses would have been supplied.—Mr. S. F. WILSON, Warsop, Notts.

It is well that those who are complaining of inaction should once more be reminded that much of the slow progress made and the high cost of building has been due to the slackness and greed of Labour, and that the immediate effect of this has been to penalise the working classes themselves.

Faute de Mieux.

Mr. Henry Aldridge is accommodating himself to circumstances. As is well-known, he vigorously supported Dr. Addison's schemes, and in an interview stated that Sir Alfred Mond had a scheme which he had submitted to the

late Cabinet, the basis of which was co-operation between the Government and the local authorities. This we may take it is now likely to be pigeonholed; but he went on to tell his interviewer that between 1910 and 1914 a group of young Conservative members took up the cause of housing reform, and that this group included the new Minister of Health. In consequence of the efforts of this group, a book was published with a preface by Mr. Bonar Law, and a new housing measure was introduced in 1912 and 1913 by the present Minister of Health, who, as chairman of the Housing Committee of the L.C.C., was mainly responsible for clearing out the Tabard Street area, one of the worst districts in south-east London. So that Mr. Aldridge feels by no means unhelpful for the future, even if the Ministry of Health is not precisely under what he would consider as the most suitable direction.

Mr. Stanley Hamp at the A.A.

We think that Mr. Maurice Webb was undoubtedly right in telling the members of the Association that working class housing could not stand the charges of ordinary architects' fees, and that if architects wanted to have a share in the work, it must be on a very much reduced scale of fees. We agree with him that the procedure of American architects, who produced designs which were sold complete for a small royalty, is a much more practicable method of helping matters, and, incidentally, raising the status of the profession, than that adopted here. In other words, there is no room for a permanent "nest egg" in architects' fees on housing, and Mr. Hamp's suggestion that the younger members of the profession should band themselves together as a designing guild to cover fields yet almost untouched by the architect, affords a more practicable method of enlarging the sphere of their operations than that of attempting to persuade the public that the smaller types of housing must be dealt with on the same lines as other and larger work. Incidentally, the more people realise that an architect's work is useful the better the profession will stand, and there is much to be done in the way of inducing that section of the public who will never put their work completely in professional hands, to accept advice and help on some modified lines.

Bournville.

Bournville has been one of the most interesting and successful of our private housing schemes, and Messrs. Cadbury have done well to publish a little book giving the result of their experience, a copy of which will be forwarded on application to anyone who writes to the Publicity Department at Bournville Works. The Trust Deed enacts that after making full provision for repairs and maintenance, the income derived shall be employed in laying out the estate and building; and the excess of income over expenditure since 1901 amounts to £101,737, though it is to be added that the enterprise has been aided by handsome gifts, such as the Schools and Ruskin Hall, which, while not producing money, add to the general value of the estate. The excess of income over expenditure shows 3.13 per cent. on the total capital, including that which is unremunerative, such as land held for future development. It is satisfactory to note that building has been resumed at Bournville, the continued progress and success of which shows what can be done by far-sighted and able firms for the benefit of their employees without loss to themselves.

Our contemporary, "The Gas World," issued last week its 2,000th number. In a paragraph which refers to this particular issue, the following statement appears: "It started with no flourish of trumpets. A reference to the first number simply gave the news of the week and comments thereupon and at the present day this is the policy followed." Since the foundation of the journal the gas industry has been and still is a growing one, and we wish our contemporary good success in the ensuing years.

London Art Galleries.

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The Winter Exhibition of the Grosvenor Gallery, which opened to the public on November 11, is an attractive and varied exhibition with features of considerable interest. There are painters well known and before the public eye, and there is work by less-known names which challenges attention. Commencing at the beginning, we find a delightfully imaginative rendering by Anning Bell of the Palace of the Sleeping Beauty, a vision with these sleeping figures which belongs to the world of fairyland and dreams. Near this the head and shoulders of "A Young Girl," by Mrs. Ernest Proctor, has a quality of line, and Alan Beeton's "Miss H." challenges our interest by the clever painting in the whole pose of the figure and the treatment of the dress of a somewhat difficult type. Sir John Lavery's "Miss Gallery" is a beautiful blonde; but the place of honour in this room is taken by Oswald Birley's admirable three-quarter length of H.R.H. Princess Mary, Viscountess Lascelles; while on the next wall his "Olive Snell" claims mention. Two clever paintings beside this are Margaret Fisher Prout's "Fountain, Battersea Park," and Louise Pickard's "Early Morning, the Thames," where the light on the surface of the great river and the immense rush of the current are effectively rendered. Gerald Brocklehurst's heads of women of southern type show careful and really fine drawing, which to me is marred by the grey-black note of colour which appears in his "Vadia" and "Dolores," and becomes almost dirty in "Hermione." Colour feeling is, however, temperamental, and there is no doubt of the fine design in the two first-named studies.

I close this first room with an early Orpen, "The Barrel-Organ," dating, I believe, from 1904, which is almost Goyaesque in its colour and grouping of the figures. In the next room Miss Anna Airy has given us the interior of a barn, which looks a perfect paradise for mice, save that the inevitable thorn within the rose tree is suggested in the figure of two children "Setting the Trap." Ambrose McEvoy has a self-portrait, and a delightfully fresh three-quarter length of the Russian, "Madam Lopokova"; and W. B. E. Ranken's "Baroness d'Erlanger" is somewhat in the grand manner, but dignified and impressive. Beside this two attractive paintings are "The Incoming Tide," by Algernon Talmage, A.R.A., and Harold Harvey's "Lovers"; and "Sunrise of the Road," by George Clausen, R.A., is of interest. In the Corner Gallery I should select for mention two landscapes by David Jagger—especially that of a bridge in Dauphiné—the flower pieces by Clare Atwood, Ethel Walker's "Coming Storm," and Austen Brown's "Potato Harvesting," with the firtrees on the hill sharply silhouetted against the sky and the figures in shadow. Oswald Birley has here, again, a fine portrait, that of Clough Williams-Ellis, M.C., Architect; and Cecile Walton's "Fairy Tale" shows two children against a bank of snow with dreaming eyes.

Lastly come the drawings in the Small Gallery. Here D. W. Hawksley has delicious colour in her "Flora," rose and dove-grey in the girl's dress, with something suggesting Chinese art in the whole feeling; and Howard Somerville's "Rina," the head of a beautiful girl in charcoal, brings with it the feeling of colour, of fair skin and hair. A good water-colour here is "Summer Sky, the Cotswolds," by Norman James, painted with a low horizon and massed clouds in a telling way, in which even the quality of the paper has helped; and Oliver Hall's "Ronda" has that artist's fine drawing and rich, reserved colour. "The Toilet," by Francis E. Hodge, shows two figures of girls bathing, outlined, as Rowlandson was wont to do, with a pen or fine brush, and with something of his rich flow of line: the figures are good and the colour rich and warm. I take last "The Market Place, Assisi," by Henry Rushbury; "Rotherhithe," by James McBey; and "Mount Olympus," by Muirhead Bone, a vision of blue sea and white mountains against a paler blue pellucid sky: and with these, all of the first order, I will include Hanslip Fletcher's "St. Bartholemew's Hospital—Interior" in the

corridor. The whole is a varied exhibition, in which the Oswald Birley portraits claim a front place.

At Walker's Galleries, on November 15, Miss Edith Cheesman opened her exhibition illustrating "Five Months in Iraq." Those five months were evidently well occupied, in spite of the rain, which the artist tells me she found a hindrance to outdoor work. "At a time," says Mr. Montagu Bell, "when to many people in Great Britain Mesopotamia conjures up the vision of a far-off and unprofitable venture, it is not without advantage to have a glimpse of the country at closer quarters." And this is just what Miss Cheesman is able to give us. Her exhibition includes some excellent photographs taken by herself; and though some of the work in colour was obviously done at top speed, it is really a fascinating record of a very wonderful land—a land of the past, but also of the future. Baghdad, above all, the city of the Caliph Haroun (still so individual in type) appears in these studies of the "Copper Bazaar," of "New Street," with the white-walled houses, and scarcely room for more than a fully-laden donkey to get past; then the ruins of ancient Ctesiphon, and yet more ancient Babylon, showing the wall of Belshazzar's Palace, where the written warning is said to have appeared. I am careful not to commit myself too fully on this point, and still less on that of "Birs Nimrud," the legendary Tower of Babel, which also appears here, as well as the two tombs of Job—as to which, apparently, the visitor interested in that patriarch may take his choice. Then we see the Tigris, with the "goofahs," or circular boats, which seem to be made of palm branches covered with bitumen from Hit, and to the unwary turn round and round instead of progressing; then the immense silent spaces of the desert; types such as the standard-bearer of the Camel Corp., with outspread green flag, who bears it with the condition that he must never turn back; and the ruler, H.M. King Feisal of Iraq. Altogether an instructive display, which offers us an insight into this land of Iraq and the Iraqi.

At the Fine Art Society Mr. Lamorna Birch is showing a very fine collection of seventy-five of his paintings. About twenty-five of these are in water-colour and the rest in oil; and the artist shows himself equally at home in either medium. In the latter, especially he delights in visions of blue Cornish seas enclosed in warm sun-illuminated rocks—such as his "Still Noon, Lamorna Cove," "Grey Cliffs" and "Incoming Tide," both these last at Pedn-e-Vounder. Sometimes he seeks a similar effect in high-banked streams, such as his "Sunshine and Shower at Butterpool." His treatment of snow in two of these paintings is very brilliant. Among the water-colours I noted "June Morning" and "A Devonshire River." This exhibition can only add to his already high position in both branches of pictorial art.

The famous Repin painting of "The Black Sea Pirates"—too large to be included in the Leicester Gallery exhibition (I noted some of the studies for this)—will, I hear, be shown from November 17 at Devonshire House, Piccadilly, for the London Hospitals. I shall notice next week "Modern Masters of Etching" at the above galleries, and the important Loan Exhibition of Paintings by Old Masters at Messrs. Thos. Agnew & Sons. The Cotswold Gallery is showing pottery and drawings by Bernard Leach. At the Little Art Rooms Richard Anson's drawings of steamers show us something of North Sea work among the trawlers, and Roger Bland's water-colour drawings show that this young artist, in such work as his two studies of Dinan, has great natural gifts in this direction.

S.B.

During the twelve months ending June 30, ninety large buildings were constructed in the city of Sydney, N.S.W., valued at a cost of considerably over £1,500,000.

At a meeting of the Charlton Kings Urban District Council, Gloucestershire, it was announced the Ministry of Health had given the Council permission to sell houses which it built at a cost of £1,000, this figure not including land, at from £400 to £450 each. The opinion was expressed that these prices were too high, and the Council decided to ask the Ministry to allow houses to be sold at £300 to £350 each.



Madonna del Monte, Vicenza.

BY B. FRASER.

The Basilica Madonna del Monte has a fine commanding situation on the hill of Monte Berico above Vicenza, and is approached by a wide road flanked on the one side by a vaulted arcade, and the other by an avenue of high chestnut trees.

The basilica presents a pleasing appearance from all quarters, but the road, being very steep, is quite a problem to pilgrim and tourist who desire a more intimate acquaintance with the church.

Many are the halts "to look at the panorama of Vicenza" (and incidentally to take a breather) as the ascent of the hill is made, which having been completed ends, in the writer's case, more often than not, in the café under the shadow of the church.

The first lap of the journey having been accomplished, one is rewarded by a grand view of the entrance front of the church, with its towering campanile clearly outlined against the blue sky.

On the second stage of the journey the road traverses the crest of the ridge of Monte Berico, and from here a charming view is to be had of the monastery with the basilica behind, and a distant view of the Alps forming a background.

The sanctuary is formed by an ancient Gothic chapel, a sketch of which is shown, including the entrance to the monastery.

The interior of the basilica is very richly decorated, and has some fine pictures.

According to "Baedeker," the basilica was built in 1669 by Ag. Borelli, of Bologna, and the small Gothic chapel in 1429, while the colonnade, 710 yards long, was built by Ant. Muttoni, in 1746.



A discovery of archaeological interest has been made in the chapel at Auckland Castle, the episcopal residence of the Bishop of Durham. Workmen engaged by the Ecclesiastical Commissioners to repair dilapidations in the west wall of the chapel found the floriated capital of an arch deeply embedded in plaster. When the plaster had been removed a perfect specimen of twelfth century arcading was revealed. Several arches which have been exposed to view are to be left uncovered. The chapel was formerly the banqueting hall of the Prince Bishops of Durham, having been built by Bishop Pudsey, who died in 1197, and the arcading, it is suggested, was plastered up by Bishop Cosin in the seventeenth century, when he turned the hall into a chapel.

Royal Institute of British Architects.

The second general meeting of the Session was held on Monday, the 20th inst., at 9 Conduit Street, W. Mr. Paul Waterhouse, president, occupied the chair.

Mr. Arthur Keen, hon. secretary, announced the following deceases since closing meeting of last Session:—

Hon. Fellow.—His Highness the Maharajah of Jaipur, elected Hon. Fellow 1891. The Maharajah was the donor to the Institute Library of the "Jeypore Portfolio of Architectural Details," consisting of six folio volumes prepared by the late Colonel Sir S. S. Jacob, C.I.E., under the Maharajah's patronage.

Fellows.—William Black, of South Africa, elected a Fellow in 1902; Walter John Burrows, 1903; James Crocker, of Exeter, 1886; Alexander Percy Durlacher, 1921; Arthur Harrison, of Birmingham, 1902; Henry Thomas Gordon, 1881; Richard Mauleverer Roe, elected Associate 1881, Fellow 1889; Arthur Henry Reid, of South Africa, elected Associate 1881, Fellow 1889 (Mr. Reid has rendered considerable service to the Royal Institute and acted as Local Hon. Secretary for South Africa since 1906 up to the time of his decease); Howard Henry Thomson, of Leicester, elected Associate 1889, Fellow 1906.

Retired Fellows.—William Larking Bernard, elected Fellow 1889 and placed on Retired List in 1919; John Bryce, elected Fellow in 1879 and placed on Retired List in 1908; Walter James Ebbetts, elected Associate 1875, Fellow 1882, and placed on Retired List in 1913; Alfred Williams, elected Fellow 1888 and placed on Retired List in 1918.

Hon. Associate.—Sir Thomas Brock, K.C.B., R.A., elected in 1908.

Associates.—George Beaumont, of Chicago, elected Associate 1881; Cyril Cliff Cheek, 1916; Robert Saxton Bessant, elected Associate 1895, Resigned 1909; Septimus Cecil Searle, elected Associate 1879.

Licentiate.—Harvey Mennie, elected Licentiate 1910; John Alfred James, 1910; Basil Thorold Stellybrass, 1911; Collins Beatson Young, 1910.

Hon. Corresponding Member.—Don. Enrique Maria Repulles Y Vargas, of Madrid, elected an Hon. Corresponding Member in 1901.

The members by rising in their places adopted a resolution that the regrets of the Institute for their loss should be entered on the Minutes, and that a message of sympathy and condolence be conveyed to their relatives.

Mr. Lawrence M. Tye then proceeded to read a paper, of which we here give extracts, on

ILLUMINATING ENGINEERING IN RELATION TO ARCHITECTURE.

Illuminating engineering during quite recent years has developed and become an applied science, enabling light to be dealt with as a definite quantity, predetermined with exactitude and no longer giving way to rule-of-thumb application.

The early use of petroleum was followed by the introduction of gas lighting and the electric arc round about the year 1809, but it was not until Swan and Edison's introduction of the electric glow-lamp in 1879, and Welsbach's discovery of incandescent mantles in 1883, that real progress began to be made.

The success of gas and electricity as illuminants, particularly with subsequent progress in their efficiency, has led to the enormous application of artificial lighting, and installations have been made indiscriminately, in many cases without any regard being paid to physiological requirements or its application to get the best effects.

In the first place this advancement in the efficiency of illuminants has brought with it such high values of intrinsic brilliancy or surface brightness that it becomes positively dangerous, apart from discomfort from the point of view of vision, to employ modern light sources without due precaution being taken to suppress glare, quite apart from matters of light distribution.

As an example, with our early oil lamps the intrinsic brilliancy of the source was in the order of 3-8 candles per square inch. In the case of the modern gas-filled electric lamp this figure has reached as high a value as 2,000 candles per square inch. This in contrast to the brightness of average white sky, which is given as in the order of 2.5 candles per square inch.

From this will be gathered the need for the judicious application of modern light sources and for suitable methods to be applied to suppress glare.

This consideration brings us to the fact that there is a correct standard or intensity of illumination for any given class of service, thus by under or over-lighting a given area you produce an unnatural condition upon the eye, with the result that eye strain and consequent fatigue sets in.

These standards have been carefully collated by illuminating engineers, operators and specialists on eyesight, and a table closely complying with the following is generally to be found in

the technical data issued by firms who specialise in Illuminating Engineering.

TABLE I.

| | | |
|--|-------|--------------|
| Art Gallery (Walls) | .. .. | 4.0 to 5.0 |
| Automobile Showroom | .. .. | 4.0 to 6.0 |
| Bank (General) | .. .. | 3.0 to 4.0 |
| Bath (Public)—Dressing Rooms | .. .. | 1.0 |
| Swimming Bath | .. .. | 2.0 |
| Billiard Room (General) | .. .. | 1.0 to 1.5 |
| Billiard Table | .. .. | 10.0 to 15.0 |
| Courts— | | |
| Squash | .. .. | 3.0 to 6.0 |
| Tennis | .. .. | 3.0 to 6.0 |
| Church | .. .. | 2.0 to 3.0 |
| Cinema | .. .. | 1.0 to 2.0 |
| Desk | .. .. | 4.0 to 6.0 |
| Drawing Office | .. .. | 6.0 to 10.0 |
| Drill Hall | .. .. | 2.0 to 3.0 |
| Engraving | .. .. | 10.0 to 12.0 |
| Factory— | | |
| General Illumination | .. .. | 1.0 to 2.0 |
| General Illumination without local lighting | .. .. | 4.0 to 6.0 |
| Local Bench Illumination | .. .. | 3.0 to 5.0 |
| Local Bench Fine Work | .. .. | 5.0 to 10.0 |
| Garage | .. .. | 2.0 to 3.0 |
| Gymnasium | .. .. | 2.0 to 3.0 |
| Hospital— | | |
| Corridors | .. .. | 0.5 |
| Wards (with no local illumination) | .. .. | 1.0 to 2.0 |
| Wards (with local illumination) | .. .. | 0.5 |
| Operating Table | .. .. | 10.0 to 15.0 |
| Laundry | .. .. | 2.0 to 3.0 |
| Library— | | |
| Stock Room | .. .. | 1.0 to 2.0 |
| Reading Room (without local illumination) | .. .. | 3.0 to 4.0 |
| Reading Room (with local illumination) | .. .. | 1.0 to 1.5 |
| Market | .. .. | 2.0 to 3.0 |
| Museum | .. .. | 3.0 to 4.0 |
| Office (General) | .. .. | 4.0 to 6.0 |
| Power House | .. .. | 2.0 to 3.0 |
| Railway Carriage | .. .. | 2.0 to 3.0 |
| Reading (Ordinary Print) | .. .. | 3.0 to 4.0 |
| Reading (Fine Print) | .. .. | 5.0 to 6.0 |
| Residence— | | |
| Porch | .. .. | 0.5 |
| Hall (Entrance) | .. .. | 0.5 to 1.0 |
| Drawing Room | .. .. | 2.0 to 3.0 |
| Sitting Room | .. .. | 2.0 to 3.0 |
| Dining Room (General) | .. .. | 0.5 |
| (Local on Table) | .. .. | 4.0 to 6.0 |
| Kitchen | .. .. | 2.0 to 3.0 |
| Bedroom (General) | .. .. | 1.0 to 2.0 |
| Dressing Table | .. .. | 3.0 to 4.0 |
| Restaurant | .. .. | 3.0 to 4.0 |
| Rink (Skating) | .. .. | 2.0 to 3.0 |
| School—Classroom | .. .. | 3.0 to 4.0 |
| Corridor | .. .. | 0.5 |
| Sewing—Light Goods | .. .. | 2.0 to 3.0 |
| Dark Goods | .. .. | 6.0 to 8.0 |
| Shop Window— | | |
| Light Goods | .. .. | 8.0 to 10.0 |
| Medium Goods | .. .. | 10.0 to 12.0 |
| Dark Goods | .. .. | 12.0 to 15.0 |
| Shops (Interior)— | | |
| Light Goods | .. .. | 4.0 to 6.0 |
| Dark Goods | .. .. | 6.0 to 8.0 |
| Station (Railway) | .. .. | 1.0 to 2.0 |
| Street— | | |
| Business (not including light from shop windows, etc.) | .. .. | 0.25 to 0.5 |
| Residence | .. .. | 0.1 |
| Country Roads | .. .. | 0.05 |
| Studio | .. .. | 4.0 to 6.0 |
| Theatre— | | |
| Lobby | .. .. | 3.0 |
| Auditorium | .. .. | 2.0 |
| Train Shed | .. .. | 0.5 to 1.0 |
| Typesetting | .. .. | 6.0 to 8.0 |
| Warehouse | .. .. | 0.5 to 1.0 |
| Wharf | .. .. | 0.25 to 0.5 |

The necessity for correct lighting was early realised in important and official circles, and the bearing that it had on the welfare of the community. A good deal of the credit of this is due to the work of the Illuminating Engineering Society, and the very active work of their Honorary Secretary, Mr. Leon Gaster.

One of the first of their achievements was a thorough investigation as to the lighting of schools and classrooms, both daylight and artificial conditions. Their findings were given in the "Illuminating Engineer Journal," July, 1913, and July, 1914.

This was followed by a thorough inquiry into the lighting of factories and workshops.

In January, 1913, the Home Secretary formed a Committee, under the Chairmanship of Sir Richard Glazebrook, Director of the National Physical Laboratory, to enquire and report as to the conditions necessary for the adequate and suitable lighting of factories and workshops, having regard to the nature of the work carried on, and the protection of the eyesight of the workers.

This Committee issued its first report in 1915 (Cmd. 8000). This was a most complete investigation, and upwards of 4,000 readings were recorded in various factories with an illumination photometer dealing both with day and artificial lighting.

This first report specified certain minimum values of illumination desirable in the interests of safety and general convenience, irrespective of that needed for the actual carrying out of the work.

In the Committee's second report, issued in June, 1921 (Cmd. 1418), there is a special recommendation in regard to the avoidance of glare. They advise that: "Every light source, excepting one of low brightness, i.e., batwing burner or paraffin flame), within a distance of 100 ft. from any person employed, shall be so shaded that no part of the filament mantle or flame shall be distinguishable through the shade unless it be so placed that the angle between the line from the eye to an unshaded part of the source and a horizontal plane is not less than 20°, or in the case of any person employed at a distance of 6 feet or less from the source, not less than 30°." These requirements will be found to be met with the best types of modern reflectors designed so that the lamp filament has its focal point well within the reflector.

In the third report, issued in March, 1922 (Cmd. 1686), the question of working illumination is considered. The Committee gives a schedule dividing up the various operations and indicates the intensities that should be provided.

Table 2 gives definitions for a number of terms most frequently referred to in illuminating engineering.

TABLE II.
Definitions.

The Candle Power is the unit of intensity of light.

Mean Horizontal Candle Power (M.H.C.P.) is the average candle power given off in a horizontal plane about a lamp whose axis is vertical.

Mean Spherical Candle Power (M.S.C.P.) is the mean of the candle powers in all directions about a lamp.

$$\text{M.S.C.P.} = \frac{\text{Total Lumens}}{12.6}$$

Foot Candle is the unit of intensity of illumination = $\frac{\text{Candle Power}}{\text{Distance}^2}$

Lumen is the unit of quantity or flux of light. One lumen of light is the quantity producing one foot candle intensity of illumination over an area of one square foot.

$$\text{Total Flux (lumens)} = \text{M.S.C.P.} \times 12.6$$

$$\text{Lumens} = \text{Foot candles} \times \text{Square feet.}$$

To study a light source intelligently it is necessary to have before us a light distribution or photometric curve in order to show the exact manner in which the light rays are distributed. This is so important that no lighting unit should be seriously considered unless this data is made available.

One method of obtaining these photometric curves is by taking measurements at the various angles through the vertical axis of a light source.

With direct lighting the only useful light is that given between 0-60 degrees other than by reflection from walls and ceiling. Using a bare lamp with dark surroundings only 25 per cent. of the total light would be usefully employed.

There are in the main three methods applied to the lighting of interiors, i.e., direct, semi-indirect, and indirect.

Direct lighting is unquestionably the most efficient, and results can be predetermined with extreme accuracy. This method is least dependent upon favourable surroundings, i.e., those having a high coefficient of reflection.

By direct lighting with prismatic reflectors it is possible to redirect 75 per cent. of the total light immediately to your working plane, whilst transmitting, in addition, 20 per cent. for the illumination of walls and ceiling.

In general practice with direct lighting it is found that at least three distinct and definite types of light distribution are necessary. These, for distinction, are usually termed extensive, intensive, and focussing.

The extensive type reflectors are required for the lighting of low buildings, or where the distance between the points is rather great. The correct spacing ratio, i.e., distance apart to height, for this type reflector, is 2 to 1 for the attainment of uniform lighting. Thus for points spaced, say, 18 feet apart, the correct height would be 9 feet above the plane you are illuminating, which is usually 2 feet 6 inches above the floor level.

The intensive type reflectors are required for the illumination of buildings with average ceiling heights and spacings. The correct ratio in this case for uniform lighting is $1\frac{1}{2}$ to 1, thus, for the example cited above, i.e., 18 feet spacing, the correct height would be 12 feet.

The focussing type reflectors are required for the lighting of buildings having high ceilings. In addition they are employed for the efficient lighting of buildings with galleries, where the low mounting of light units would bring them into the direct range of vision. In other cases the focussing type is used where concealed lighting effects are aimed at.

Particularly are focussing type units necessary in the case of factory lighting with overhead travelling cranes. In practice it is generally desirable to adopt as high a mounting height as possible, consistent, of course, with reasonable accessibility. By doing this you reduce the liability of glare, and it is particularly noticeable the extent to which shadows are reduced in consequence. This latter point is emphasised particularly in school lighting where you get a rising floor level.

For exceptional purposes, such as highly localised lighting, shop windows which are narrow in relation to their height, even more concentrating reflectors than those coming under the heading of focussing are required.

Now in adopting these greater mounting heights it does not follow that the lighting efficiency of an installation suffers in consequence.

It is now as well to consider the various media available for the control of light, and to see how far they may be expected to comply with the requirements as set out above.

From the point of view of efficiency and flexibility of control, also for complete conformity with the fundamental laws of optics, we will first consider prismatic glass reflectors. These reflectors are designed on the principle of total reflection, and by modification in the contour it is possible to obtain any type of light distribution from extensive to extremely concentrating.

Opalescent glassware, whilst giving good diffusion, has not such complete control of the light. Incident rays on reaching the opal surface are mostly broken up and scattered more or less equally in all directions. Thus whilst the contour of an opalescent reflector may be varied as much as is desired, it does not appreciably affect its final light distribution curve, which remains of a general character.

Vitreous enamelled reflectors suffer from the same defect, that alteration in contour does not appreciably alter the character of the final light distribution curve, which limits their application in practice for most efficient lighting.

Semi-indirect lighting units comprise a translucent dish made of opalescent glass, prismatic glass, or alabaster. They send most of the light to the ceiling, from which it is reflected downwards, but a certain percentage passes through the unit itself, depending upon the density of the medium.

This method of lighting must of necessity be more wasteful than direct lighting, considered from the point of view of energy, seeing that the ceiling has to be converted into a secondary source. The reflection coefficient for a good white ceiling is 82 per cent., which immediately creates an absorption independent of that of the unit itself.

In semi-indirect lighting, therefore, it is necessary for its successful application that the ceilings are made as light in colour as possible, also that they are plain surfaces as free from obstruction as possible. It is desirable to bear in mind subsequent deterioration of a ceiling with age, which naturally has a bearing on the maintenance of efficiency of this system. The system should not, of course, be applied to situations with roof lights, etc., otherwise a very heavy loss will result.

The use of a ceiling as a reflector is unscientific and the results unbalanced, for the reason that attention can best be concentrated upon a given object when it is well illuminated and the surroundings are not made to predominate. The latter point is accentuated in the case of totally indirect lighting, where the source appears as an opaque body.

Semi-indirect lighting came into prominence in the early days of the gas-filled lamp. The latter having a much higher intrinsic brilliancy than the former metal filament lamps, they required greater diffusion. In many cases this was overcome by the wholesale application of opalescent bowls, but the inefficiency of this method immediately took away the benefits that should otherwise have been derived from the increased candle-power which these lamps made available.

On investigation it will be found that large numbers of semi-indirect lighting installations are being replaced by more efficient means, and the solution seems to rest in a return to units of a direct character, but offering a higher degree of diffusion. Illuminating engineers have been engaged for some time now towards this ideal, and already several most promising new units have been made available.

It is, however, in such matters that illuminating engineers would welcome a closer co-operation with the architectural profession. We find, in so many cases, where theory would indicate a satisfactory procedure, it is made impossible by æsthetic considerations. An example is in church lighting. There has been considerable activity of late in raising the standard of lighting in such buildings. For the efficient treatment of such interiors illuminating engineers find immense advantage in placing their light units in the centre of arches, adopting chain suspension from the apices. By doing this it results that the lighting of the nave and side aisles is practically shadowless. On this procedure, from the architect's point of view, there seems to be two lines of thought. In some cases we are left to our judgment, in others we find ourselves in a hornets' nest.

It is impossible for an architect to be fully conversant with all the latest applications of lighting, nor is it necessary, seeing that any firms engaged in illuminating engineering would be only too happy to place before architects their experience, and assist in the drawing up of their lighting schemes, in most cases without obligation. It places no restrictions upon the architect—actually it might relieve him of considerable anxiety and trouble, in addition to which he has the certainty of results.

DISCUSSION.

Sir John H. Parsons, President of the Illuminating Engineering Society, in proposing a vote of thanks, said Mr. Tye's paper had been full of good material and extraordinarily well illustrated. Nevertheless, he felt almost more inclined to move a vote of thanks to the R.I.B.A. for devoting an evening to the discussion of that important subject. Speaking as one ignorant of architecture, he would say that the traditions of our architecture seemed to have been principally derived from the South and Greece, where there was an excess of light, and where the buildings had been designed to keep out light. Only comparatively recently have the advantages of good interior lighting been appreciated. The attitude of the architect and the illuminating engineer to their work was fundamentally at variance; one regarded it as applied art, the other as applied science. His (the speaker's) personal belief was that applied art will become applied science. The criterion of both was fitness. The advantages of co-operation would be equally great for both parties. If architects showed more interest in illumination the public would be spared a repetition of some of the monstrosities to be seen to-day. The problems connected with the lighting of a building might well be submitted to investigation before the building was put up. The matter of general illumination was one which affected an architect's design in an especial sense. If the arrangements were designed by an architect in combination with an illuminating engineer they might be made helpful to the beauty of the design.

Mr. W. R. Rawlings, past president of the Electrical Contractors' Association, agreed that a closer association was needed between the architect, the fittings maker and the illuminating engineer. In the early days an architect used to study the design best fitted to suit a building. If to-day the three would work in co-operation, the problems of lighting would assume a different aspect. Architects to-day must design their buildings for use with artificial illumination. There stood many difficulties in their way due to antiquated prejudices. In his own opinion direct illumination was the proper method, provided that the light source was properly screened from the eye.

Mr. Hurst Seager suggested what a glorious thing it would be if the exterior dome of St. Paul's Cathedral was illuminated at night in the same way as the dome of the Capitol at Washington. Modern shop window lighting still continued to show mistakes which somewhat marred their otherwise beautiful general effect. It was a pity the investigations carried out by various societies were not collaborated so that architects, librarians, illuminating engineers, shopkeepers, and all the rest, should each have some idea of the activity of the others.

Mr. Leon Gaster, hon. secretary of the Illuminating Engineering Society, said he was voicing the opinion of the Illuminating Engineering Society when he expressed the pleasure they had to emphasise before the R.I.B.A. the fact that they liked architects to come to help them. There was a vacant chair on their Council which had been reserved for a representative of the Institute. It was only by the exchange of views between the user and producer that progress could be achieved. Until they come together nothing was doing.

Captain E. Stroud and Mr. Percy Waldram having also spoken, Mr. Paul Waterhouse put the vote of thanks to the meeting.

The vote was passed by acclamation.

A company has been recently registered to work the slate quarries at Ballachulish on a profit-sharing basis with the employees.

R.I.B.A. War Memorial.

On Monday, November 20, at 3 p.m., the Earl of Crawford and Balcarres, late First Commissioner of Works, unveiled a war memorial tablet at the Royal Institute of British Architects. The tablet contained the names of 232 members and students of the Royal Institute who laid down their lives during the Great War. The memorial contains the name of Field-Marshal Lord Kitchener, who was an Honorary Fellow of the Royal Institute.

Lord Crawford was received by the President, Mr. Paul Waterhouse, the Past-President, Mr. John W. Simpson (who was the assessor in the competition for the war memorial), Vice-Presidents and Hon. Secretary of the Royal Institute.

Mr. John W. Simpson presented to Lord Crawford, Mr. Trenwith Wills, A.R.I.B.A., the designer of the memorial.

Lord Crawford then delivered the following address:—

"We commemorate our brother architects whose paths had seemed to lay in peace, whose work was destined to be wrought in harmony until they heard the great rending cry—

" 'Quiet untroubled soul, awake, awake!

Arise, fight and conquer, for fair England's sake! "

"Hearing, they answered, and answering, they gave their lives. Two hundred and thirty Fellows, Associates and Students of the Royal Institute were killed. Here is a list of their honoured names—no mere census sheet, but a Roll of Honour which records achievement: the same act of sacrifice accomplished by every one of them, but each in its different way, and each with the grandeur of personality in its suffering and abnegation. On these occasions we are perhaps too liable to assess the equilibrium of sorrow, too ready to dwell upon the pathos of young life abruptly cut short. What secrets lie unrevealed in these tragic columns, what hopes and aspirations unfulfilled, alas! what poignant grief in the circles of family and home. Gone they are. Dead we must reckon them to be; but though dead, we must not look upon them as absent, since they still speak to those who survive, and will ever recall that without their agency all that we value as individuals, all that is most precious to our citizenship, all, indeed, which gives us the freedom of ourselves and of our country, would have been overwhelmed in disaster. So let us take comfort since glory is never without its measure of happiness. And who shall say that they missed their chosen careers. They were indeed great architects who built up the stalwart bulwarks of our Empire's defence with the very body of their death. Their creative genius has realised a fuller expression in that their earthly ideals have been translated into terms of spiritual reality, whose souls and sacrifices form even now a part of the great Temple not made with hands. Nevertheless, our mourning should not be concealed. We shall never know the real extent of our loss; but if, as we hope, there are to-day the stirrings of a renaissance in the noblest of the arts, if with the coming generation we are to witness the fruits of long and patient enterprise, of growing and more discerning appreciation, of the improved organisation and equipment on which such earnest effort is being expended—we must weep for much young talent that has been dispersed, commenting that so many who were born to observe order and comeliness should have saved them for us at the cost of their lives. Let us be thankful that so many of their comrades were spared. One thousand civilians issued from the peaceable calling of the architectural world, ready to die like the rest of them as soldiers; these are with us to-day. Their names do not appear on the altar stone of the Royal Institute. Upon them must fall the burden of carrying on the traditions of British Art, of maintaining the high standard of public spirit and duty—above all, they will hand on to their successors the names of those whose hard lot they were ready to share. They will honour those who died, those for whom the thirst for truth and beauty—the artist's ceaseless quest—must at length have found its satisfaction at the very source of beauty and truth where eternity affirms the conception of an hour. Four long years have now passed since upon the high and perilous peaks of victory our brothers laid the foundations of peace. We have still to erect that vast structure through Toil and Tempest and through Time. With undiminished faithfulness, with hearts which no tribulation can wear down, and which no discouragement shall turn aside, let us go forward and build. To their victorious memory, I have the honour, and with deep reverence, to unveil this memorial."

After the tablet had been unveiled, the Rector of St. George's, Hanover Square (the Rev. Prebendary F. N. Thicknesse), performed the dedication ceremony.

A vote of thanks to Lord Crawford was moved by the President. Mr. Waterhouse said:—The claim that the poets had upon mankind was twofold, represented a double debt. First that they seize and render into words thoughts that would otherwise go unexpressed; and further, that they crystallize as thoughts vague aspirations and unformed regrets, or shapeless

unsubstantial wonderings; thus—by creative contact with ourselves—making a mental treasure house of what unhelped by them, were chaos of the mind. Lord Crawford, in his words that afternoon, had been their poet. He had framed in speech many unspoken thoughts which, even if spoken by them, certainly could not have reached his level of utterance. Nay, more. As a true poet, he had left thoughts rising in their hearts, uplifting thoughts which, if they were their own, were none the less born of the inspiration of his words. In thanking him, they thanked him also in that the bronze tablet (itself a message bearer) would to the eyes and memories of those present speak when they looked on it from day to day, not merely with the voice of reverent and ever-affectionate homage to the Dead, but also with an echo of the words spoken so helpfully by him that day. In the name of architects who mourned the loss of comrades, brothers, sons, and in the name of parents and of those whoever they might be who, standing there, saw on that stone the name of one of them who

“Added love to love by severing

In love's own name some dearest tie of love.”

he thanked Lord Crawford, and the thanks sprang from the heart.

Mr. Arthur Keen, hon. secretary, in seconding the vote of thanks, alluded to the special fitness of the dedication being performed by Prebendary Thicknesse for the reason that his brother, Philip Thicknesse, was one of their most esteemed members. Lord Crawford had always been most ready to associate himself with the Institute, indeed, he was one of themselves, and shared in their common loss and sorrow.

The following are notes from the minutes of the Council meeting held on November 6:—

Registration:—The Registration Committee submitted a draft Bill for the Registration of Architects which was approved in principle by the Council, who directed that it should be sent to the Allied Societies for their comments.

Provincial Conference, 1923:—The invitation from the Incorporation of Architects in Scotland to hold the next Provincial Conference in Edinburgh in June, 1923, was cordially accepted.

The Bristol Society of Architects:—The Union of the Bristol Society of Architects and the Gloucestershire Architectural Association was approved.

Statutory Examination:—A certificate of competency to act as district surveyor was granted to Mr. Clifford Cyril Knowles.

The Whitgift Hospital, Croydon:—The Croydon Borough Council were invited to meet representatives of the Royal Institute to discuss alternative measures which would have the object of preserving the hospital intact.

London Squares:—The President, Professor F. M. Simpson and Professor S. D. Adshead were appointed to serve on a committee of the London Society to consider measures for the protection of London squares.

The R.I.B.A. Art Standing Committee have arranged a visit to the works of Messrs. Farmer and Brindley, Ltd., marble masons, of 63 Westminster Bridge Road, S.E.1, on Saturday, December 9, 1922, at 10.30 a.m. The visit is arranged for the morning in order that actual work in progress may be inspected, and it is hoped that architectural students will join in the visit. Members of the R.I.B.A. and their friends and students of the architectural schools who wish to take part in this visit should apply to the Secretary R.I.B.A., by whom tickets will be supplied.

A scheme is on foot to extend the Longton Cottage Hospital, which was established in 1860. The scheme should cost about £14,000, and already £2,755 is in hand.

The Architectural Association will hold their next ordinary general meeting on Monday next, November 27, when an address will be delivered by Miss Edith Place entitled “A Woman's View of Domestic Architecture.” The meeting will be held in the Dining Room, preceded by an informal supper, which will be served at 7 p.m. (morning dress).

In connection with the proposed retention of the Tolbooth Steeple at Glasgow Cross a communication has been received from His Majesty's Office of Works indicating their willing co-operation with the Corporation in preserving the ancient structure. It was stated, however, that they had submitted the plans prepared by the Corporation to the Chief Inspector of Ancient Monuments (Mr. Peers) and the Director of Works (Sir Frank Baines), and that these officials were of opinion that the underpinning of the steeple might present certain difficulties and problems. The Office of Works suggested, therefore, that Sir Frank Baines should visit Glasgow and discuss the matter with the responsible officials of the Corporation. The Corporation Committee agreed to this proposal. Sir Frank Baines, when he visits Glasgow, will meet Messrs. John Keppie and Henderson, the architects, and Mr. Nisbet, the City Engineer.

Another Curse.

By J. M. Christy.

Attempts have recently been made to rouse the public from an easy apathy with regard to two curses of the age—two remediable evils about which no one took the trouble to think until the light of modern science was turned upon them and lent the requisite *caché* to the question. First came the protests against the “curse of noise.” Then came a burst of interest in the question of posters. And the two questions are now commanding a certain amount of spasmodic attention.

But even were these two curses eliminated by the fanatics or modified by the philanthropists, there would still remain the Curse of Letters. The appalling clamour of chaotic, ill-shaped lettering, painted, printed, gilt and metal, which we passively tolerate in our streets must be as detrimental to physical and mental sanity as the “disordered sounds” which torture the ear and exhaust the energy of mind and body. The outlook in too many of our London streets is wildly, irritatingly restless. One is compelled against one's will to read all day long. One reads without remembering what one reads and without profiting by it. No doubt posters, inscriptions, and announcements of various kinds are an indispensable part of modern life, but their quality is scandalously disproportionate to their quantity. The pictorial form of advertisement is increasingly capable of adding to the attractiveness of our streets when appropriately placed and well designed, and those who plead for more colour in London ought not to despise the coloured poster. But the subject of *lettering* (not only the comparatively transient lettering of posters, but also the more permanent kind placed upon buildings themselves) needs far more active control by public opinion than it receives at present. Continued apathy courts the plea that where criticism is absent no criticism is called for. We are too ready to take discomfort and injury lightly where remedies might be found, while we waste time in railing against the inevitable. If, as we are told, the ugliness of noise has the effect of blunting our sense of beauty, so also has the raucous clamour of bad lettering. More than this, the very beauty or orderliness of many a piece of architecture which might have soothed or stimulated our senses is often obscured or obliterated by this very curse.

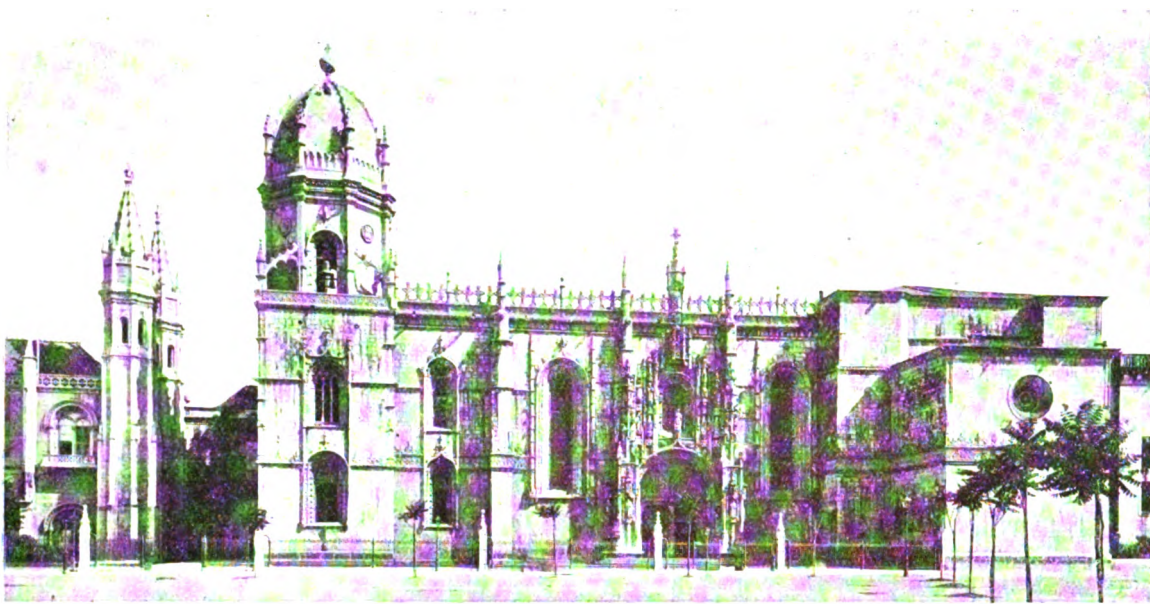
And yet we allow it to go on! For the hundreds who are ready to join in any outcry against the architectural profession, and to rage against the mediocrity of modern buildings and modern street architecture, there seems not one who will boldly lift a voice against this Curse of Letters, which falls like a noxious blight upon so many good buildings and turns the mediocrity of others into a ghastly ugliness. Whether we get good buildings or not from the modern architect, we certainly do not seem to deserve them. The perpetual examples before him of the treatment meted out to the creations of former architects may well deter the true artist of to-day from giving of his best to a public which appears so deficient in appreciation of architectural beauty.

Perhaps it is not too late for a genius to arise who will combine the wisdom of a modern scientist with the æsthetic perception of ancient Greece, a philanthropic spirit with an instinct for successful advertisement. To such a man the advertising necessity of the present day presents a great opportunity. His task will be to evolve a system which, while accomplishing its purpose of attracting public attention, will add its own contribution to the harmony of life, and will not deprive the multitude of that reposeful beauty which is no mere luxury, but an essential condition of sanity.

Must we wait in silence for the turning of this curse to blessing until the schools produce a Balaam expert in the new script?

Mr. Henry Thomas Gordon, F.R.I.B.A., died on the 14th inst. at Harrow-on-the-Hill, in his 77th year.

The Royal Sanitary Institute have accepted an invitation from the Mayor and Town Council of Hull to hold their next Congress in that town from July 30 to August 4, 1923.



CHURCH OF S. MARIA, BELEM.

Notes from Portugal

By G. A. T. MIDDLETON.

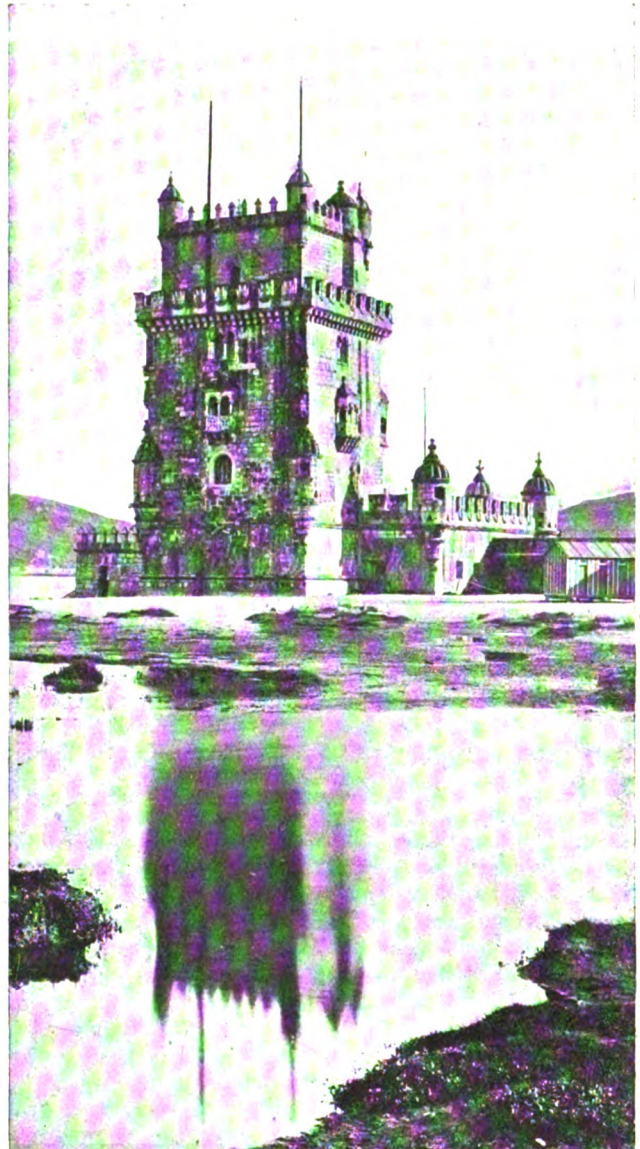
No. VI.—Belem.

Belem, though situated only a few miles from Lisbon, near the mouth of the Tagus, escaped the great earthquake, or at any rate the more devastating fire which followed it, and although one of its three important buildings has been "restored" till it is difficult to distinguish old from new, they are all of sufficient singularity to be worthy of closer study than a short article can do more than suggest. Unfortunately, it is the most singular of these, known as Belem Tower, which has suffered most from the restorer, and it can only be conjectured that the square, keep-like mass may trace its origin back to what we know as Norman (perhaps Moorish) times—that is, to the twelfth century or thereabouts. It stands on the water's edge, and, serving still as a landmark, it must also for many centuries have been the chief fortress for the defence of the entrance to the great harbour of Lisbon.

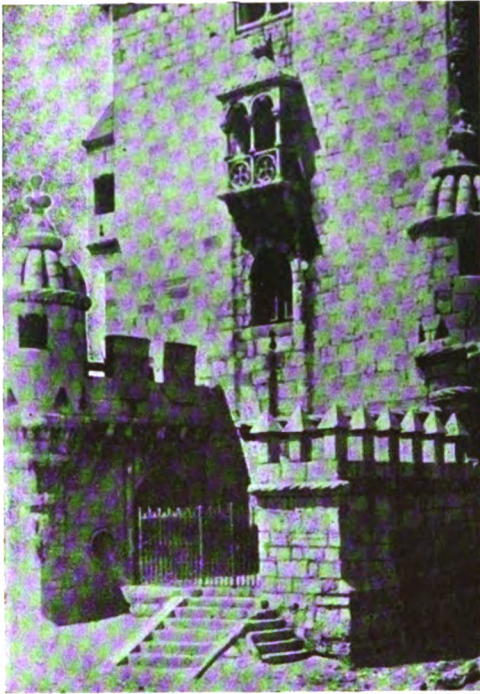
As it stands now it exhibits all the extravagances of Manoëlian Gothic (with possibly a little of modern fantasy added) as applied to a military stronghold. Machicolations and tall embattled parapets have been added, as well as corbelled and domed angle turrets and machicolated open oriels; and on the three landward sides the tower has been surrounded by a lower work, similarly treated, but also holed for cannon close to the water level.

But if the tower can only be accepted with the caution that it is probably a forgery to a great extent, the Church of S. Maria and the adjoining Convent of S. Jeronymos remain authentic monuments of the Manoëlian style, with little either added to or deducted therefrom; and very peculiar the style, thus displayed, appears to English eyes, unquestionably rich if not always beautiful. The great thing which seems to be missing to the church is a visible roof, rendering the apparently later octagonal bell tower and its dome abrupt, especially as the transepts and chancel were never finished. But, on the other hand, the concentration of effort upon the great south entrance, enhanced by plain wall surfaces and similar windows on either side—rich and yet in no way competing with the doorway—is exceedingly satisfactory.

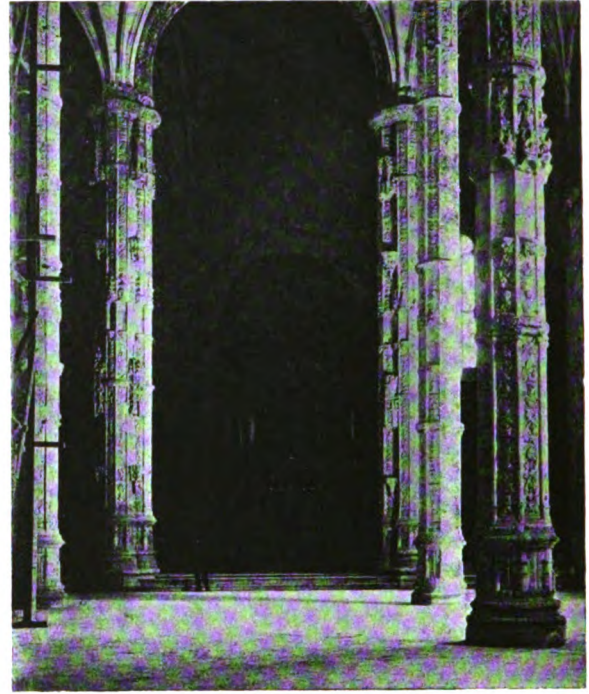
It will be noticed that the statuary, of which there is much, is arranged to surround and crown the doorway, instead of occurring within it as in France, and that the result is to give a tabernacle effect to the whole composition; but of the more minute details of mouldings and enrichments it is impossible to attempt description. Compared



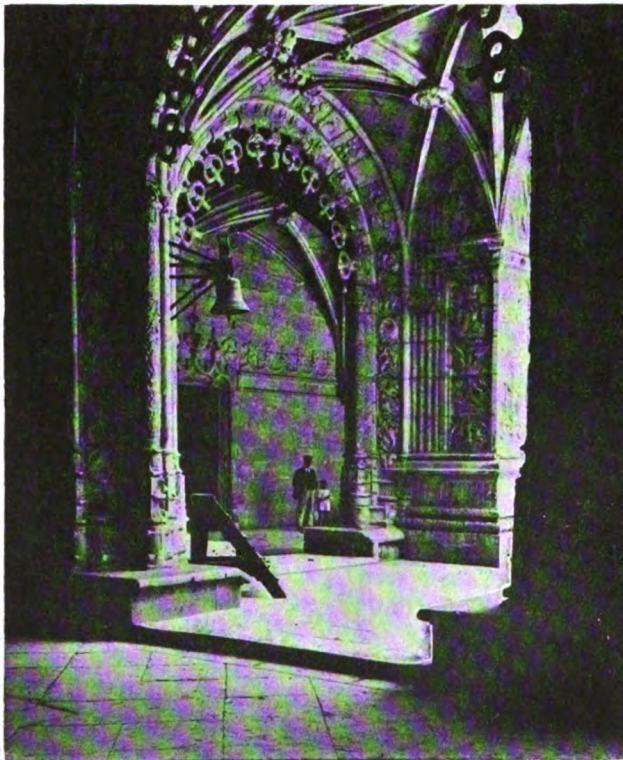
BELEM TOWER.



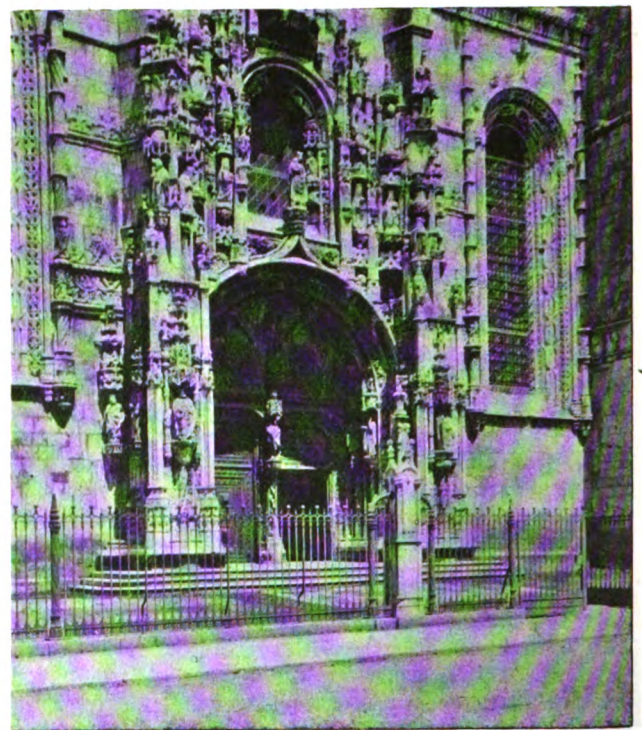
ENTRANCE TO BELEM TOWER.



INTERIOR OF S. MARIA, BELEM.



ANGLE OF CLOISTER, S. JERONYMOS, BELEM.



SOUTH DOORWAY, S. MARIA, BELEM.

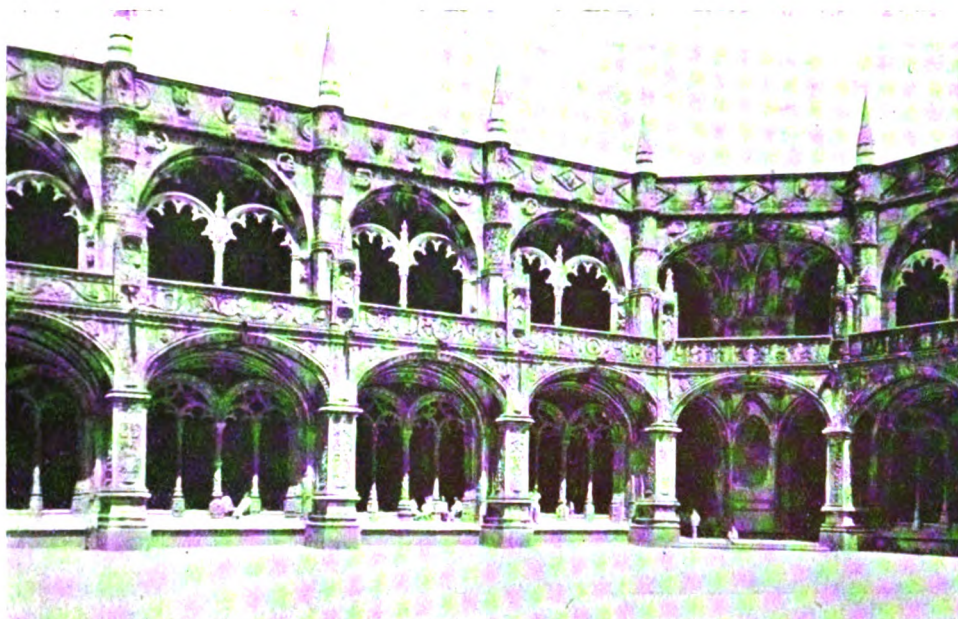
with those of either the French "flamboyant" or the English "perpendicular," of much the same date, they lack distinctiveness.

Perhaps, however, of all the Gothic styles which can be definitely named and distinguished, the Manoëlian was the latest, for it was prevalent during the reigns of Henry VIII. of England and François I. of France. It is not surprising, therefore, to find French Renaissance detail at least mingled with the Manoëlian Gothic, as, for instance, upon the columns of the nave arcade at Belem, which, in spite of their crown capitals and strong canopy work, are strangely reminiscent of those of St. Eustache in Paris, though they greatly exceed, and are probably unique, in richness. This note of extreme elaboration might quite easily have been carried too far, but it is concentrated upon the columns, well lighted by south windows and, when it is open, by the great south door, while the rest of the church, including

transepts and chancel, is in the deepest gloom. In few churches is there to be seen such extreme contrast managed so successfully.

The adjoining cloisters of S. Jeronymos carry on the same admixture of Manoëlian and François I. detail, but in general character they resemble those at Batalha—on a somewhat smaller scale, but better displayed, for the court is paved instead of being filled with sub-tropical foliage. It is of two storeys, as is common, but the recessing of the tracery on the ground floor within groined vaulting to the depth of the outer buttresses is peculiar, especially at the canted angles, a detail of one of which is given.

This detail also draws attention to the extremely curious Manoëlian cusping of the inner arches, and shows one of the numerous small doors leading out of the cloisters to the separate cells of the inmates. The complicated bases are also evident, similar in character to those of the French



CLOISTER, S. JERONYMOS, BELEM.

"flamboyant" Gothic, and, in close juxtaposition, the autumnal vine leaf, found in late Gothic work in all countries, and ornament of a Renaissance type.

The cloister is now used as a boys' school, and the old refectory, with its fine vaulted roof, still serves its original purpose, and is shown in the photograph with tables laid out for the boys' midday meal. All the architectural details in it are purely Manoëlian, including the heavily ribbed vaulting, the excessive use of the cable enrichment, and the strong autumnal vine leaf carving in the window jambs.

A pair of doorways, however, leading out of the cloister is as completely Renaissance, of the sixteenth century; but the work is more broadly treated, and with a better sense of the value of the large and the small in juxtaposition than is usual at that time in France. It may have been a somewhat later introduction, under the influence of Italy rather than of France—and Northern Italy, too, at its very best. "How can this be?" may be asked; yet Lisbon, close by, was a great seaport, contending at that time with Venice for the trade with India. It was thus open to all influences except that of isolated, Protestant England.

The R.I.B.A. Exhibition of Contemporary British Architecture, which was postponed from November 1, will be held from Friday, December 1, to December 22.



REFECTORY, CONVENT OF S. JERONYMOS, BELEM.

The Preservation and Restoration of Ancient Buildings in the Devastated Districts of France.

Some account of this was given by M. Paul Léon in his address to the Institute of France at its annual meeting.

The reconstruction of shattered Gothic edifices, he remarked, was rarely impossible. Their robust nature and perfect equilibrium was extraordinary. Of 750 buildings injured, only 12 had been abandoned as hopeless, although 50 more were still classed as doubtful. Three hundred restorations had been completed at a cost of something under 100 million francs, and others would shortly be finished.

Consolidating work came first; a slow process, so slow as to sometimes cause impatience to the uninitiated. For instance, the foundations of Rheims Cathedral had occupied experts about a couple of years. But they had had the satisfaction of solving the problem which had puzzled architects for the last thirty years, the cause of the subsidence of the vaulting. These great churches were usually built on the ruins of still more ancient sanctuaries, and the breaches between the old masses of stonework were sometimes embanked in an unsatisfactory manner.

Nor was substructure the only problem. At St. Rémi (Rheims) older timber work had been replaced during the twelfth century by stone vaulting. This vaulting, menacing to destroy its supports, was replaced by timber during the last century. The church having been unroofed by bombardment, etc., it would now be possible, by using a ferro-concrete framing hidden in the roof and linked to the main supports, to replace the twelfth century work. The frontages of the Town Halls of Rheims and of Noyon could in similar fashion be restored by using ferro-concrete, and throwing the entire weight of the masonry on isolated supports.

Rheims being razed to the ground, the foundation plans of many old convents and churches had been revealed after centuries of mystery. The destruction of the modern city showed how numerous were the ancient sculptured stones embedded in more recent constructions, in some cases a complete mediæval façade would thus be discovered. All such relics were being carefully preserved. In one shed alone were 2,000 artistic cast-iron chimney backs from ruined residences. A sarcophagus was found in consequence of sundry subsidences of the church of St. Rémi.

Now, so far as temporary constructional work was concerned, architects were masters of the situation. Even the tottering tower of the Cathedral at Cambrai had been saved. The quaint gables of the old squares at Arras had been rebuilt; the restoration of the belfry was under consideration. Regarding the delicate question of the reproduction of purely decorative work, M. Léon made an exception for mediæval statues such as adorn the great portal of Rheims. But pinnacles, gargoyles, etc., were an essential part of a construction. By utilizing artists and skilled artisans, and by a careful study of documents, restorations might be effected which preserved the general characteristics of these ancient piles. A Gothic building must be a harmonious whole.



VIEW OF TEMPLE.

A Chinese Temple in Formosa.

By K. W. Dowie.

The well-known conservatism of the "heathen Chinese" is nowhere better demonstrated than in the art of building. In other countries to see a building is to be able to date it fairly accurately, but in China the same rules have been adhered to for so long that the appearance of a temple such as that described here gives us no sort of clue as to whether it has stood for 30 years or a thousand. Obviously, however, a type of architecture which could endure for so long must have its good points.

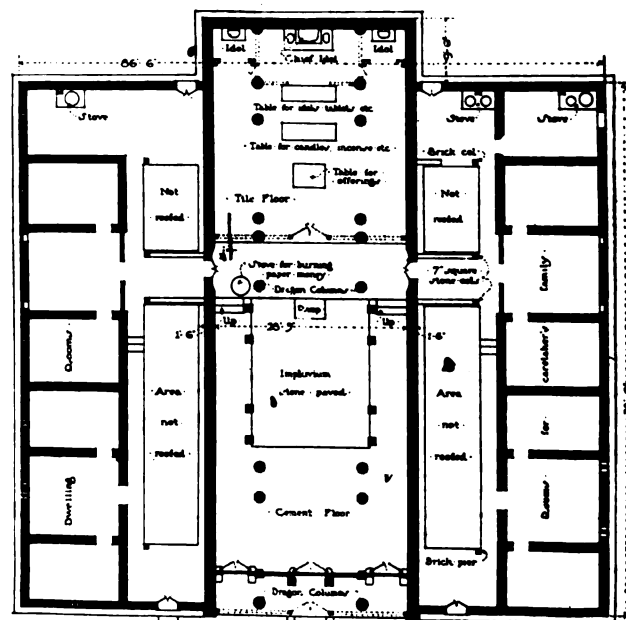
A Buddhist temple of the type usually found on unrestricted sites, it is beautifully situated on the side of a little hill, facing south-west. Temples in crowded towns usually do away with all but the centre section, enclosed between the two long walls, and the priest or caretaker sleeps on a bed placed in the rear, not far from the chief idol; here the caretaker has a whole wing to himself, and another wing is rented.

The plan is simple, the worshipper passing through a highly decorated entrance porch to the inner arcades leading around the unroofed court or impluvium to the main building in the rear. As the altar containing the chief idol is placed against the rear wall, where no light can penetrate excepting from the impluvium, we have an effect, doubtless sought for, of gradually increasing darkness and mystery as the idol is approached, reminding us of the temples of Egypt. In scale, however, there is no temple in China which can compare at all with the great buildings of Egypt or Greece. Chinese materials, too, are more perishable. Worship in China is for the most part individual, and its paraphernalia is very simple, consisting of a table for the god in a small space curtained off from the rest of the building, with other tables in front for tablets, idols and incense, another empty table upon which the worshipper may place his offering (usually of food), and a stove where he may burn imitation money. This stove is as often as not without a flue, the smoke escaping through the impluvium.

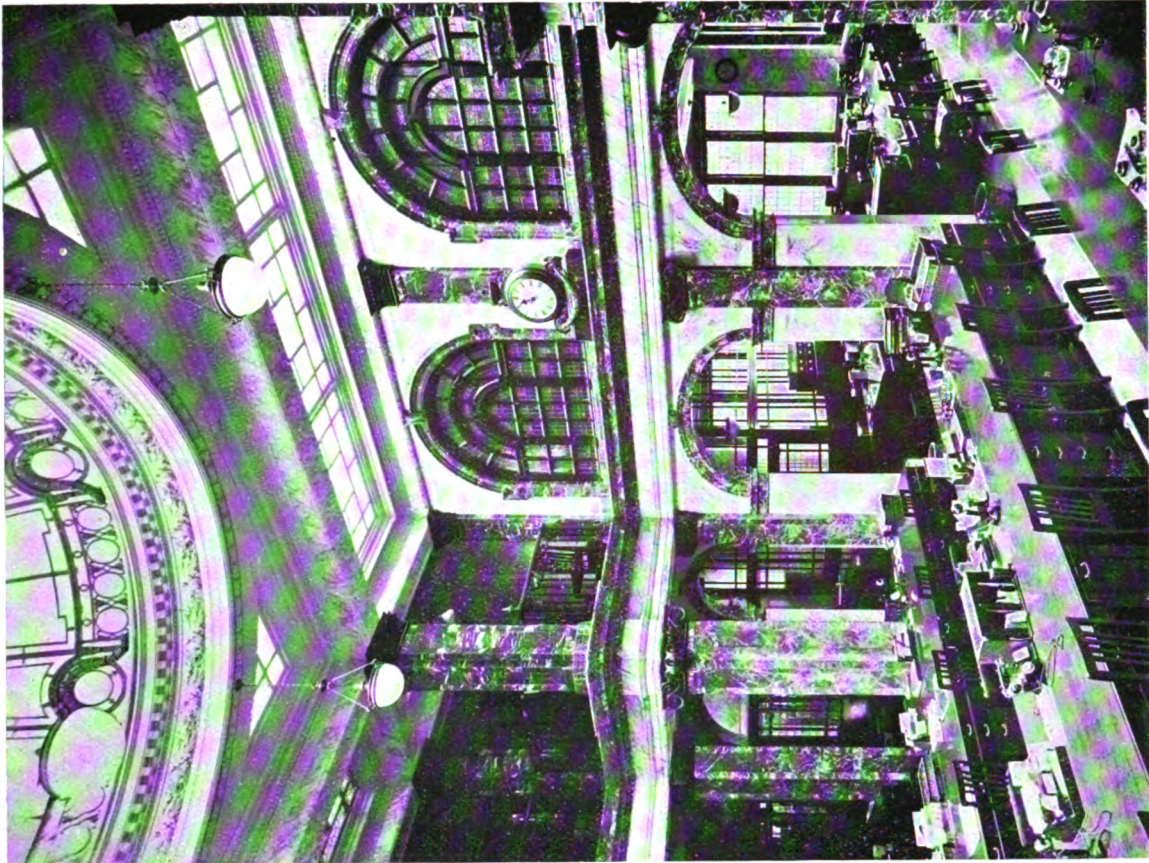
Foundation walls are of cobble stones, and those above these are either of brick plastered over or of a thick tile 7 by 9½ by 2½ in.; courses of headers alternate with tiles set on edge, the hollow voids being filled with mud and pebbles. Variations in colour provide a most interesting wall surface. This material being scarcely strong enough for door jambs, they are usually made of brick. Door heads are beamed in stone, with occasionally a semicircular brick arch. In warm localities the windows shown on front and sides, consisting of three or four narrow slits 4 in. wide, exclude the worst of the heat and at the same time satisfy Chinese demands as to the amount of light necessary,

so there is no great objection to them. The Chinese, however, have conceived of nothing better than these for their sleeping rooms, which constitutes a serious menace to health.

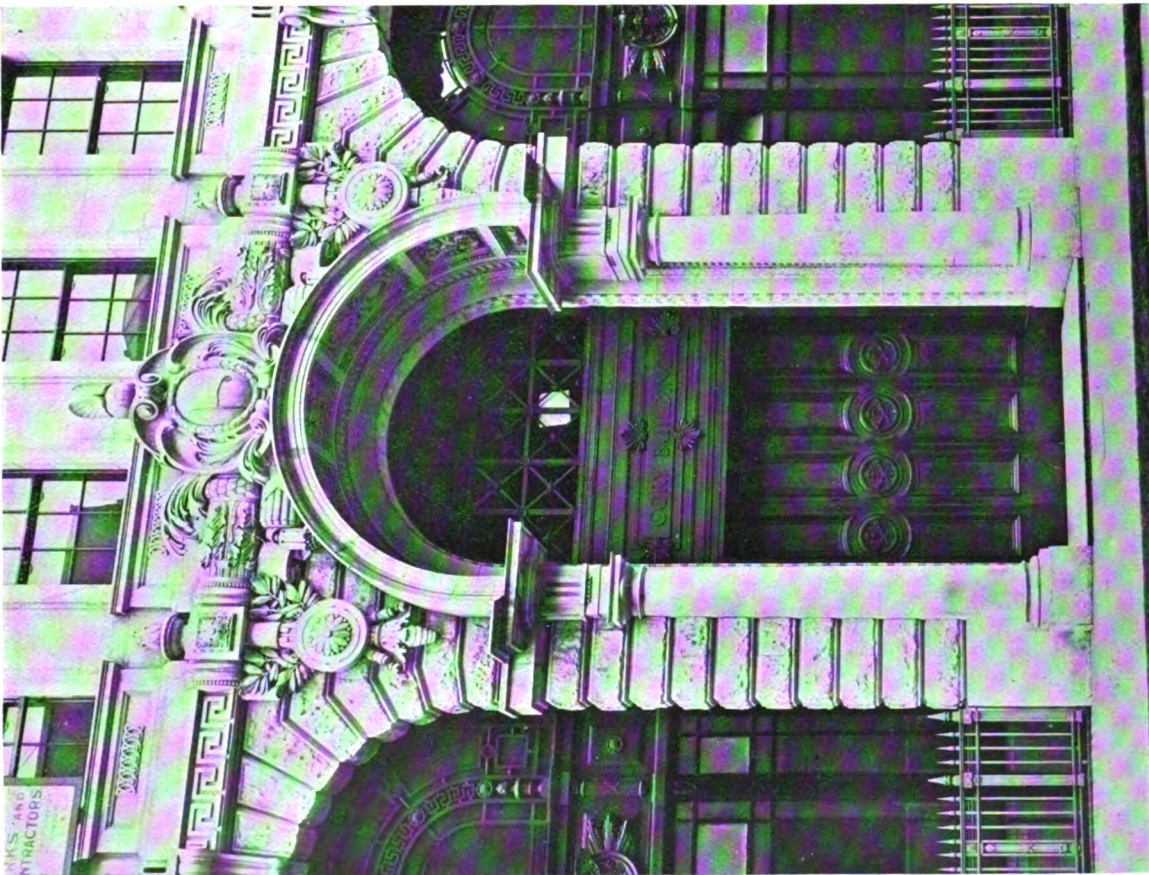
Important columns are always of stone. Dragon columns, made of one piece of stone and representing the labour of one artisan for nine months or a year, may still be made for a comparatively small cost, and are a product of the age-old system of apprenticeship still in force in the various guilds. Notice the simple chamfering of the corners of square columns, producing a sort of imitation entasis on the diagonal view. All columns are made without caps. The universal practice is to stop the stone column a couple of feet below the roof brackets and to splice it there to a wooden column of equivalent section, so that this latter may be mortised to receive the wooden brackets supporting the roof. These brackets are often of great beauty, as may be seen from the illustrations. After being elaborately carved in full relief they are covered with bright paint with reds, blues, and golds predominating. A remarkable feature in Chinese architecture is the complete absence of the truss. Not only this, but it seems never to have occurred to these builders, as Russell Sturgis points out, to use a diagonal tie or strut of any kind. Brackets are always rectangular, a system resulting in great extravagance in the use of lumber in all their roofs, though certainly



Plan of the Temple and Its Accessory Wings



GENERAL OFFICE.



MAIN ENTRANCE.

CORY BUILDINGS, FENCHURCH STREET, E.C.

ARCHITECTS: W. GILLBEE SCOTT, F.R.I.B.A., E. DOUGLAS SELWAY, A.R.I.B.A., AND THE LATE EDGAR STONES.



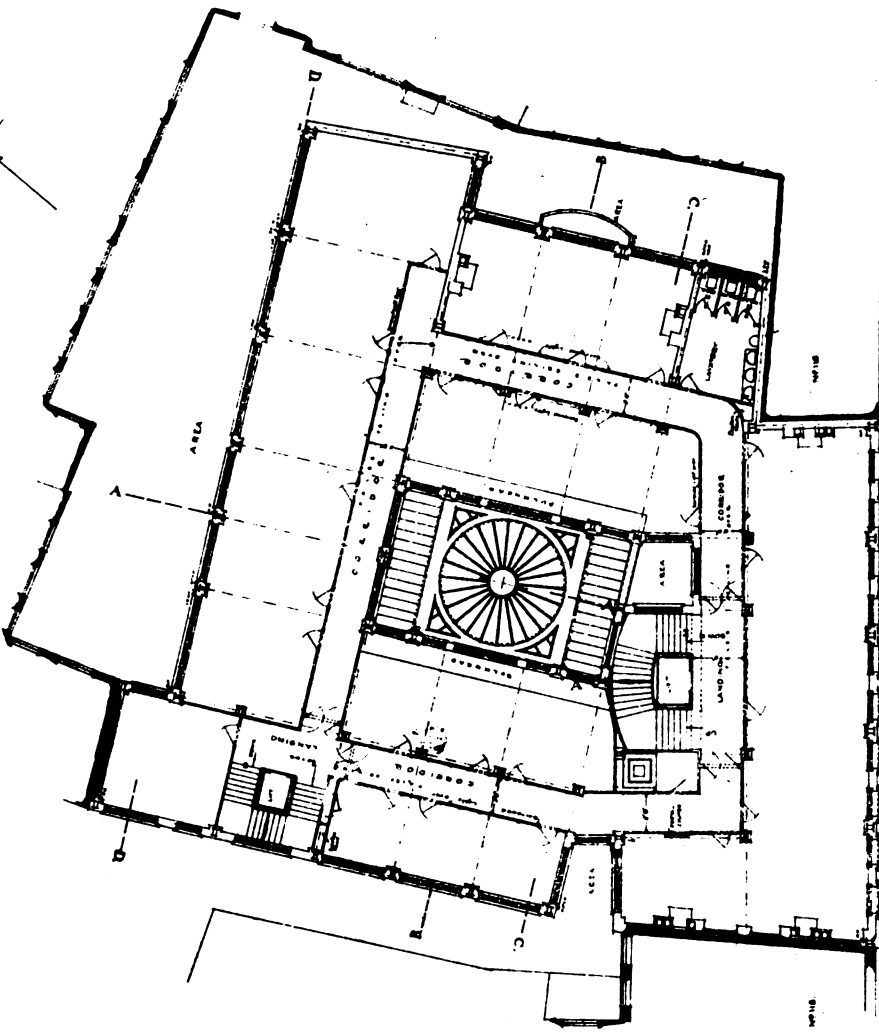
THE BOARD ROOM.



THE BOARD ROOM.

FENCHURCH STREET E.C.

New Annex
MESSRS W. CORY & SON LTD

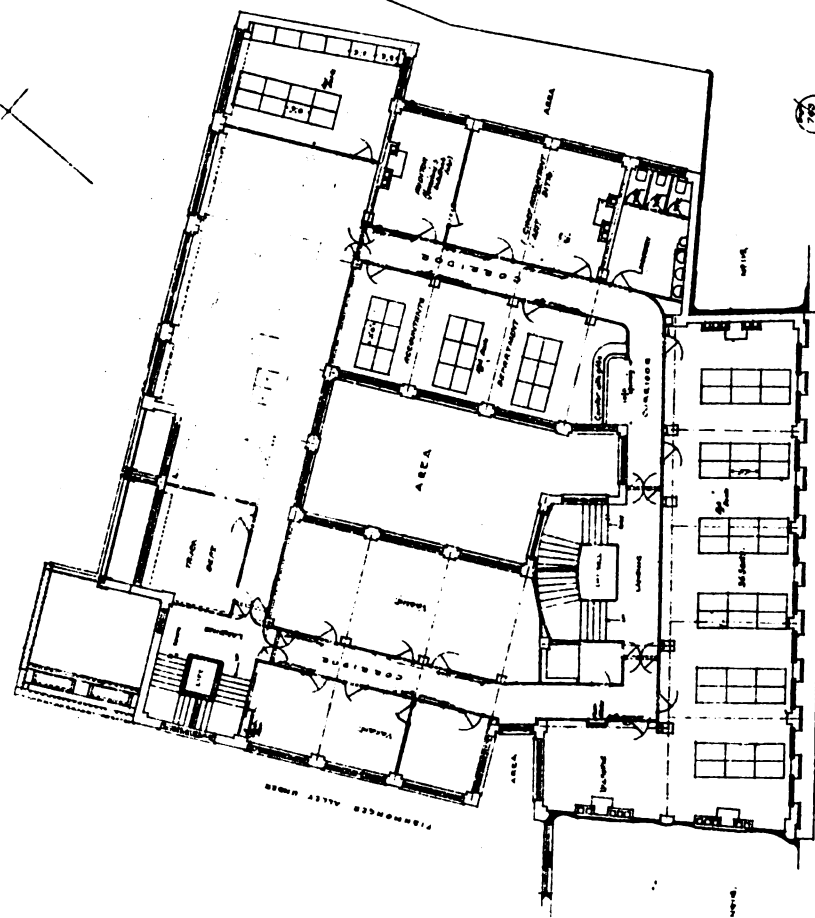


SECOND FLOOR PLAN

Scale of feet

CORY BUILDINGS, FENCHURCH STREET E.C.
SUB-DIVISION OF FOURTH FLOOR.

ADDITIONAL TO NEW PLAN



FOURTH FLOOR PLAN

Scale of feet

CORY BUILDINGS, FENCHURCH STREET, E.C.

ARCHITECTS: W. GILLBEE SCOTT, F.R.I.B.A., E. DOUGLAS SELWAY, A.R.I.B.A., AND THE LATE EDGAR STONES.

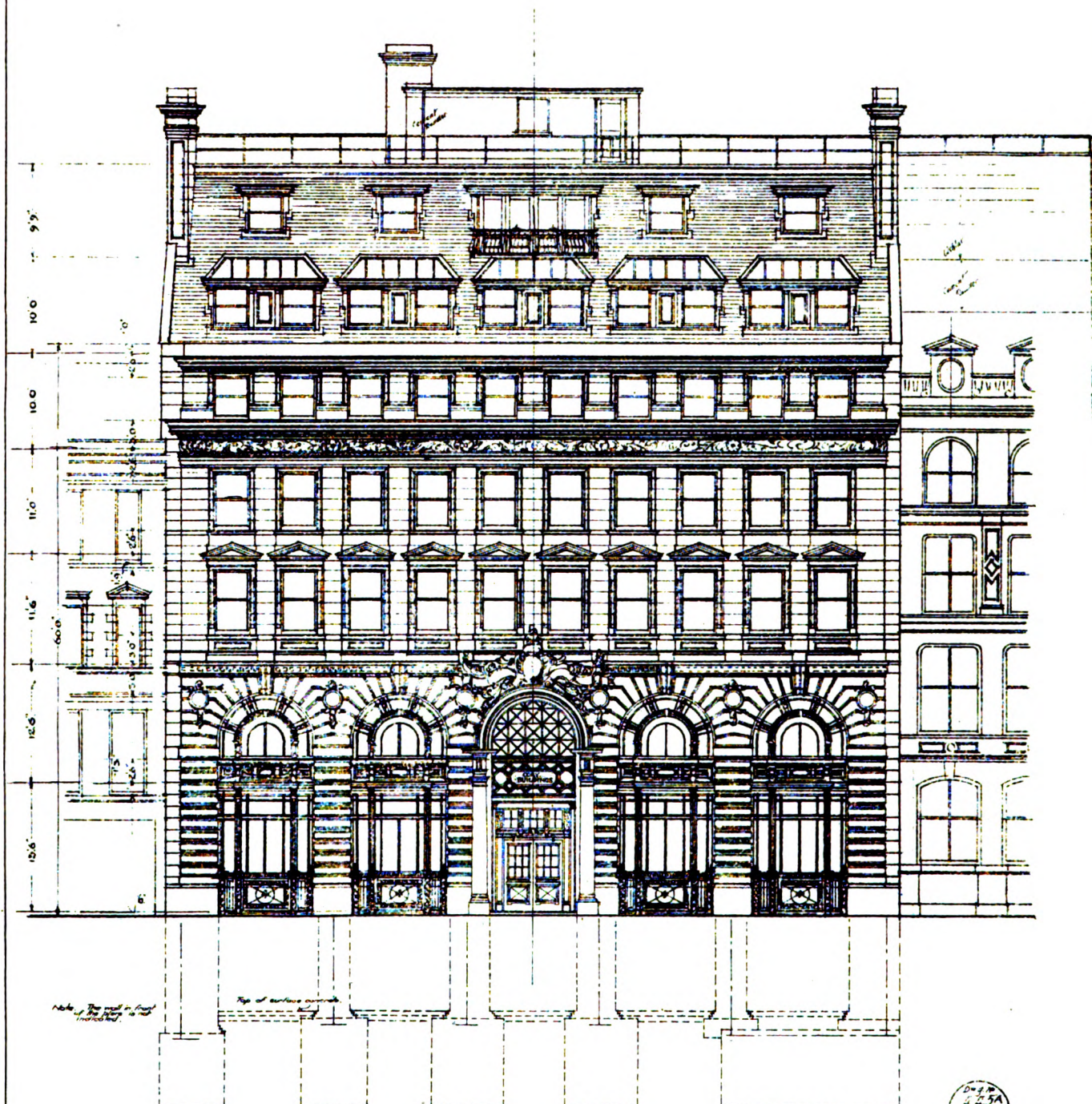
PHOTO LITHO SURNAME HAYCOCK (PRINTERS) LTD 69 & 70 DEAN STREET LONDON, W.1

FENCHURCH STREET E.C.

New Premises

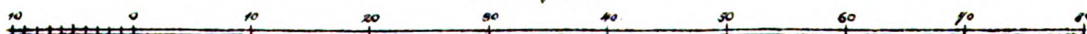
for

MESSRS W^m CORY & SON L^{td}



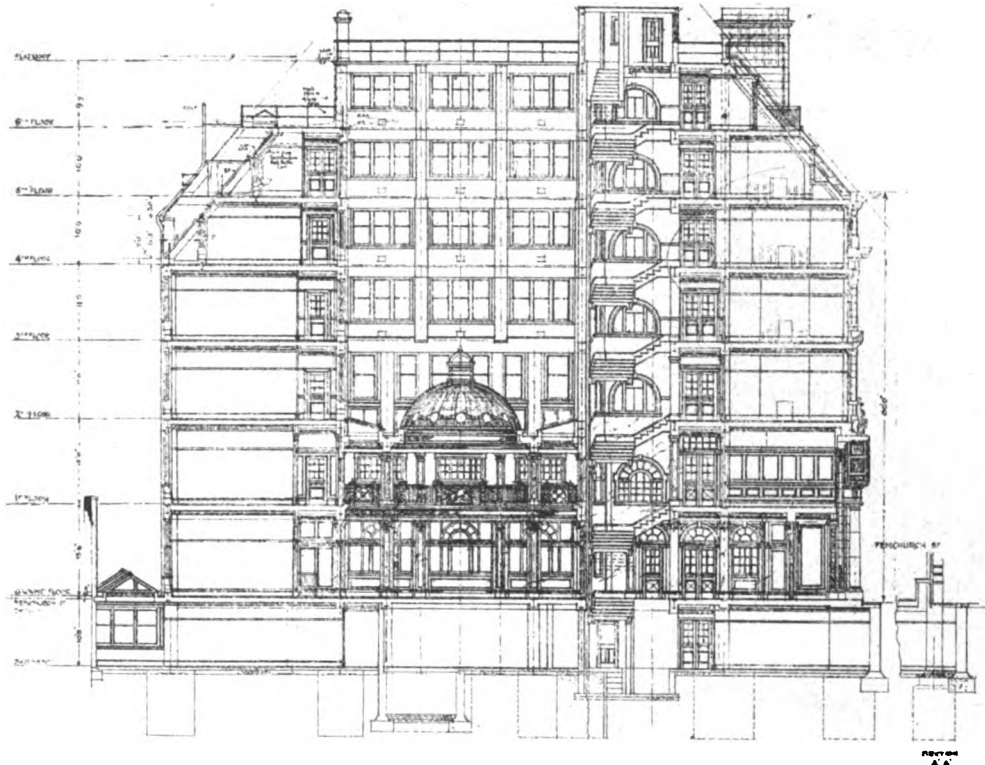
ELEVATION TO FENCHURCH STREET.

Scale of feet



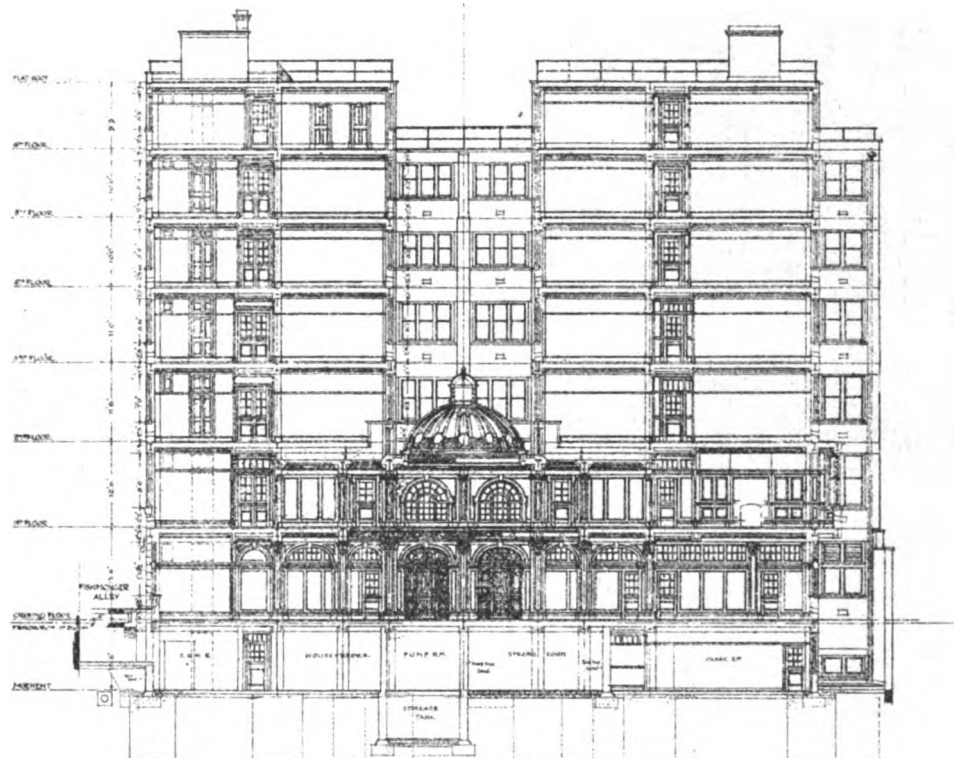
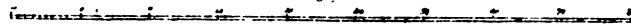
FENCHURCH STREET E.C.

New Premises
for
MESSRS W. & C. CORY & SON LTD.



SECTION A.A

Scale of feet

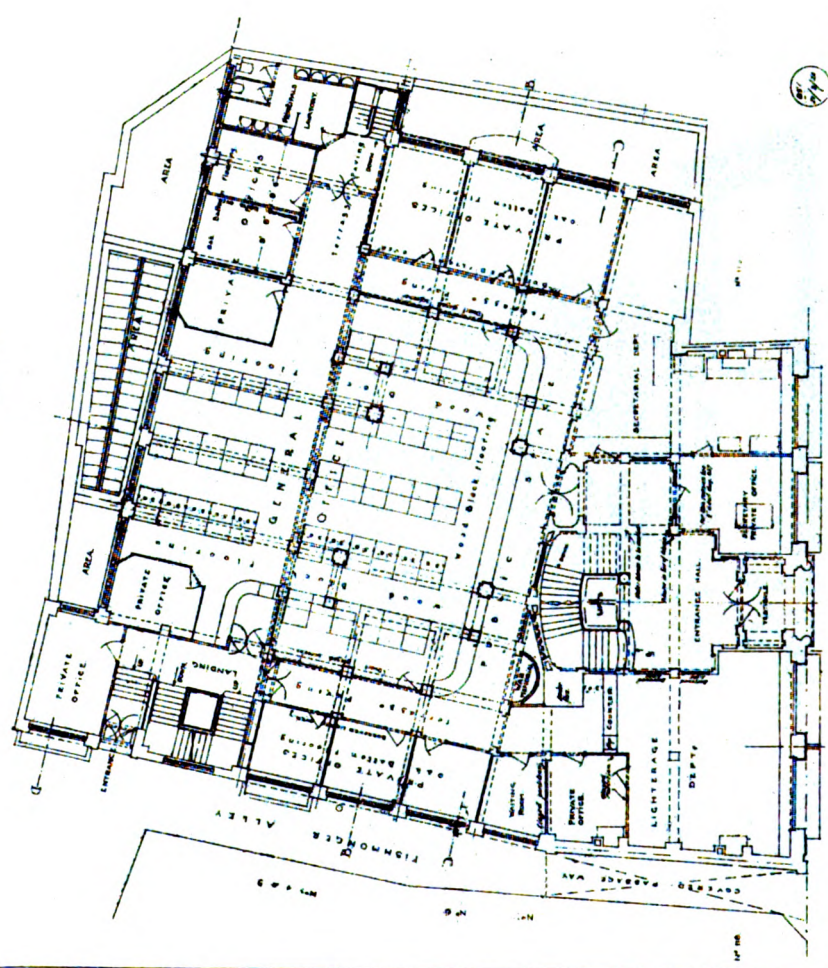


SECTION B.B

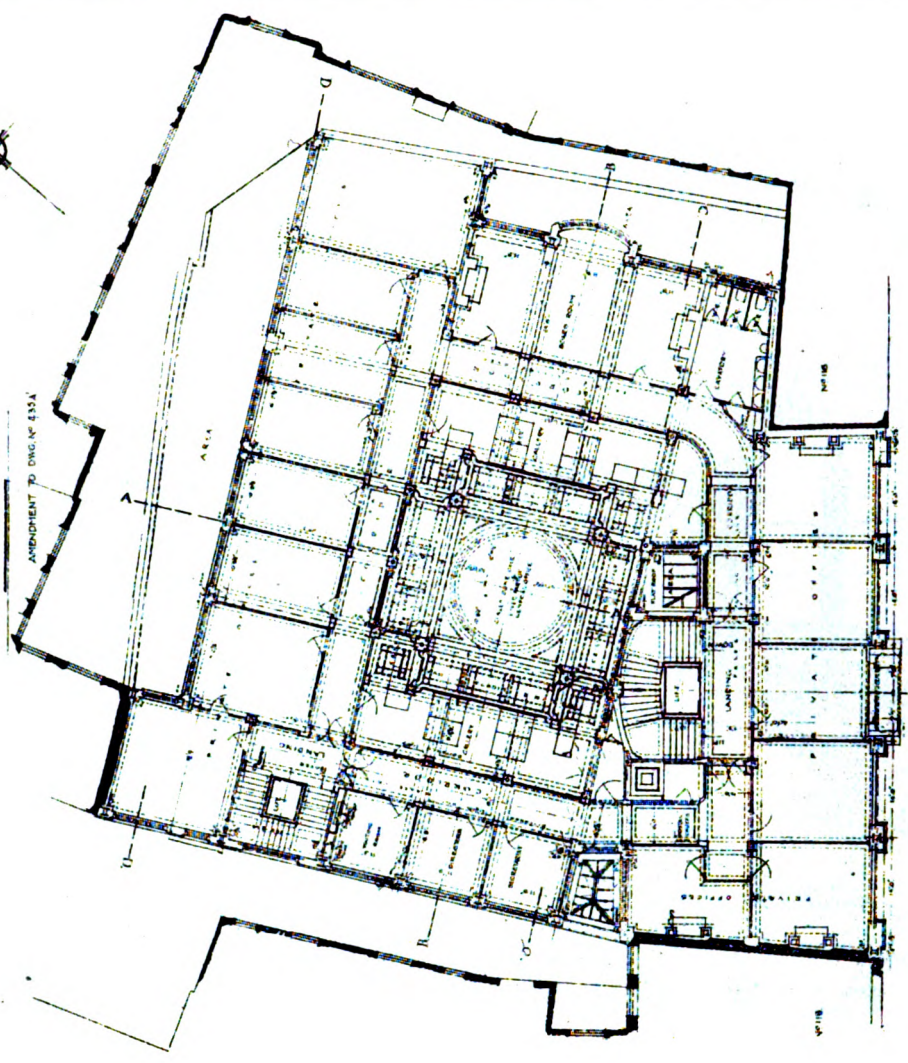
Scale of feet



FENCHURCH STREET E.C.
New Premises
MESSRS W. CORY & SON LTD
AMENDMENT TO DRAWING NO. 4334
AND NO. 731



FENCHURCH STREET E.C.
New Premises
MESSRS W. CORY & SON LTD
AMENDMENT TO DRAWING NO. 4334



FENCHURCH STREET
FIRST FLOOR PLAN
Scale of feet

CORY BUILDINGS, FENCHURCH STREET, E.C.

ARCHITECTS: W. GILLBEE SCOTT, F.R.I.B.A., E. DOUGLAS SELWAY, A.R.I.B.A. AND THE LATE EDGAR STONES.

PHOTO LITHO. SPRAGUE-HAYCOCK (PRINTERS) LTD 69 & 70, DEAN STREET, LONDON W.



DINING ROOM.



A DIRECTOR'S OFFICE.



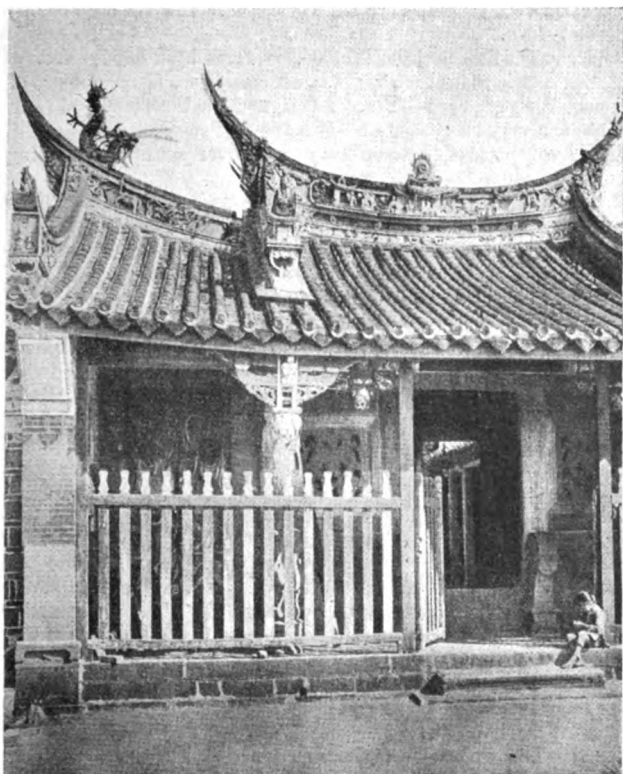
THE VESTIBULE.

CORY BUILDING, FENCHURCH STREET, E.C.

ARCHITECTS: W. GILLBEE SCOTT, F.R.I.B.A., E. DOUGLAS SELWAY, A.R.I.B.A. AND THE LATE EDGAR STONES.



THE VESTIBULE.



ENTRANCE PORCH OF CHINESE TEMPLE IN FORMOSA.

producing an effect more harmonious and restful than that caused by diagonal members, and at the same time satisfying the demands of the eye as regards strength.

The one point where the Chinese "lets himself go," however, is on the ridges. Hip roofs are usually avoided, the delicate curves of ridge and gable eaves giving a very distinctive note. These ridges are built up of brick and cement, reinforced by iron rods at the turned-up corners. Dragons perched jauntily near the ends of the main ridges keep away evil spirits, and a brilliant colour effect is given these and the ridges themselves by a covering of broken bits of glazed tiles of various hues. Tiles in Formosa are thin, and laid with from $2\frac{1}{2}$ to 3 in. to the weather. Pan tiles have a very slight curve to them. In ordinary work, cover tiles are of the same section, laid reversed, but in the main temple roof a nearly circular cover tile will be seen, with a treatment of the eaves that gives a most interesting shadow.

Inscriptions, whether written on cloth banners, carved on stone columns, or carved out of wood and suspended in appropriate places, are a striking feature of interiors, and each character is a work of art in itself. To quote from Chamberlain in regard to Japanese writing, which, of course, is based on the Chinese: "If this writing is to us a mountain of difficulty, it is unapproachably beautiful—above all, it is bold, because it comes from the shoulder instead of merely from the wrist. A little experience will convince anyone that in comparison with it the freest, boldest English hand is little better than the cramped scribble of some rheumatic crone. One consequence of this exceeding difficulty and beauty is that calligraphy ranks high in Japan (and China), included among the arts." The inscription seen over the tables in front of one altar reads: "Great virtue will save the Universe," surely a laudable, if non-committal, sentiment! The beauty of the panelled wood screens in Chinese temples needs no comment. Altar tables are sometimes elaborately panelled in front, with full relief wood carvings, the cost running as high as \$1,500 or \$2,000 for a single table.

It may seem a far cry from the architecture here illustrated to what we require to meet our needs in America, yet there are many ways in which Chinese examples can help us. Surely there is something to be said for making the roofs of our one- and two-storey work more interesting. There seems to be in Oriental peoples an unerring instinct for balance and proportion, shown in their massing and

extending also to matters of the smallest detail, as will be seen by a close examination of any Chinese ideograph. In this utilitarian age it is refreshing to turn to a building where the religious impulse compels the builder, and where things are made as they are for the sheer delight of having them beautiful.

These ancient temples were built before the beginning of the trade unions, and their architects were undisturbed by strikes; but even in the "unchanging East" conditions are changing, and Chinese architecture is gradually losing something of its charm as fashions come in from the outside.

(From the "Architectural Forum" of New York.)

The Ideal House.

The "Manchester Guardian" is not, we hope, going to follow the example of the "Daily Mail," whose ideal house becomes somewhat wearying, but in some "Hints to Builders" on the subject we are told that "there is no reason whatsoever why hot and cold water should not be laid on to every bedroom." We do not know whether the writer realises that these conveniences cost a good deal of money—so much that in houses of considerable size clients often come to the conclusion that they must dispense with them. We are told that builders have "never been over generous with cupboards." This, too, is not surprising, seeing that in the average small house floor space has to be economised, and what is taken up with a cupboard must be deducted from a room. In addition, in the average house expense has to be kept down and a cupboard costs money. We are told that corners must be rounded, and we admit that is so in a hospital, but we assert that in the average house rounded corners are utterly unnecessary and an added expense. We are told that the average sink is a source of tribulation, and it should be possible to pack greasy plates in a tank of running water and so do away with the business of washing up altogether! There are many labour-saving contrivances which are used in hotels and clubs, but they are expensive and could not be adopted in the average house. Altogether, the article is one we should have expected in a paper which had a smaller reputation to keep up than that of the "Manchester Guardian."

"The Architect" Fifty Years Ago

NOVEMBER 23, 1872.

COUNTY SURVEYORS IN IRELAND.

The officers—such as county surveyors, &c.—who have to report on the works, roads, and buildings to the grand juries in Ireland appear not to have a pleasant office. Mr. Bence Jones writes to the "Times" on Monday last, that for twenty years he has endeavoured to reduce the rates in his barony, but was steadily outvoted by the ratepayers, who will not attend unless there is a job in which they are interested, in which case they will vote for every job, great or small. Mr. H. Temple-Humphreys, M.I.C.E., the county surveyor of Limerick, confirms this in a letter which appeared on Wednesday, in which he says that it is absolutely true that the ratepayers, nominated as at present, often combine for the perpetration of jobbery; and, moreover, when, as it sometimes happens, they are balked in carrying through their mutually advantageous arrangements, they combine into a "ring" in order to hatch some imaginary case of hardship or neglect of the county officers whose duty it is to advise the Baronial Sessions as to the public utility of the projects brought before them. In nearly all cases a most lamentable want of citizenship is displayed, combined with petty vindictiveness and malicious efforts to coerce by intimidation those very officers for whose protection they ought to be the first to give battle. The consequence is that the administration of an otherwise good law is fraught with the utmost risk, both physically and socially, to the county officers engaged in its application.

The "Labour Gazette" states that the number of trade disputes involving stoppages of work reported to the Ministry of Labour as beginning in October were 32, in addition to which 25 disputes which began before October were still in progress at the beginning of the month. The number of workpeople involved in all disputes in October (including those workpeople thrown out of work at the establishments where disputes occurred, though not themselves parties to the disputes), was nearly 14,000, and the estimated aggregate duration of the disputes was 186,000 working days. Since the beginning of 1922 the stoppages of work owing to trade disputes have involved over 500,000 workpeople, and the aggregate duration of the stoppages has been nearly 20,000,000 days.

Claim for Fees.

In the King's Bench Division on November 16 Mr. Justice Bailhache heard an action brought by Mr. Robert John Thomson, architect, of Hill Road, Wimbledon, against Gwynnes Engineering Co., Ltd., and Gwynnes, Ltd., in which the plaintiff sought to recover £665 in respect of fees for work done.

Mr. Lewis Thomas, K.C., and Mr. K. Preedy appeared for the plaintiff. Mr. A. Baker represented the first defendants and Mr. Croom Johnson the second defendants.

Mr. Thomas said the plaintiff was a well-known architect and F.R.I.B.A., and had had considerable experience in industrial construction. On February 11, 1920, Gwynnes, Ltd., approached him and an interview took place, when instructions were given to him to do certain work upon a site they had acquired at Hammersmith for a motor-car factory. The plaintiff did certain work and had no notification of any change in the company. October came and the defendants said they were not going on with the work. The plaintiff sent in a modified list of his fees and the defendants sent a cheque for 100 guineas in full discharge of his services. Plaintiff accepted it on account, but his claim was altogether for £770 and he now sought to recover the balance of £665. This, Counsel understood, was scarcely a quarter of what the plaintiff would have been entitled to under the scale of the Institute.

His lordship: Why will not the defendants pay?

Mr. Thomas: One defendant tries to push it on to the other. The second company, he thought, had sold its assets to the first.

Mr. Croom Johnson said the issue would be whether at an interview on March 3 his clients gave instructions that the plaintiff should then and there prepare plans for the complete scheme or whether they gave instructions that he should prepare plans for a £30,000 scheme. The question was how much Gwynnes, Ltd., had to pay, having regard to the instructions given and whether the charges were reasonable.

Mr. Thomson, giving evidence, said he had an interview on February 17 with Mr. Cannell, the defendants' general manager, when the latter told him what was proposed and witness visited the site at Hammersmith. On March 3 he called on Mr. Cannell, who told him they would not be able to spend so large a sum at once as the amount they had proposed and they would have to do it in sections, and he mentioned that £30,000 would be the utmost they could spend at the time. After discussion witness was told to prepare the whole scheme, a portion of which could be carried out at a small cost and the rest as they were in a position to do it. He prepared a scheme for the whole site and submitted plans to Mr. Cannell. The latter gave a general approval and left the matter for witness to proceed with. He also got out drainage plans and saw the borough surveyor upon them. Afterwards Mr. Cannell said it was decided to go on with a single storey building and at his instructions witness got out drawings, specifications and quantities for the building. He also entered into the necessary arrangements with the adjoining building owners and submitted the plans to the London County Council and obtained their consent. Later, the defendants informed him they had decided not to go on at all.

Mr. Thomas: Are your charges scale charges or not?—Below.

Cross-examined by Mr. Croom Johnson, witness said he did not think the cost was mentioned at the interview on February 17. He did not remember Mr. Cannell saying they had made a rough estimate of the cubical content of the buildings they proposed to put up and the cost was to be roughly £30,000.

Counsel: I suggest you went away to look at it in the light of a little sketch plan?—Yes.

At the interview on March 3 I suggest there was a discussion between you and Mr. Cannell as to what could be done for not exceeding £30,000?—Yes.

And that nothing was decided as to going forward with any scheme either for £30,000 or for the other figure, £94,000?—Yes. The factory was to occupy the site and I was to get out the scheme.

Mr. Cannell gave you no instructions to prepare any drawings for anything more than a £30,000 building?—No.

He also told you the maximum he proposed to spend then was £10,000 to £15,000?—I have no recollection of it.

Your fees are worked out having regard to the scheme for which you prepared the plans?—Yes.

Did you tell Mr. Cannell on March 19, 1920, that the sketch design you produced then would involve the company in an expenditure of £100,000?—No. Mr. Cannell had previously given me to understand that if the scheme was larger than they could afford they would go on with a section of it which would not cost more than £30,000.

You know Gwynnes, Ltd., have admitted throughout that they gave you instructions to do what was necessary to place orders for the steelwork and that they are liable to you for that?—Yes.

Did you ever prepare detailed working drawings of the £94,000 scheme?—No.

Did you for the small building—the stores building?—Yes.

As far as the main building was concerned we never got out of the very early stages?—Yes. I designed the building.

That is a very early stage?—It is the first stage.

You know none of these buildings were ever put up and nothing further was done?—Yes.

Did you know from October, 1920, onwards that the buildings were not going to be proceeded with?—I concluded it.

The Judge asked Mr. Croom Johnson with whom he said the contract was made. Counsel replied that it was Gwynnes, Ltd., the other company not having been formed.

Plaintiff, further cross-examined, said he and his assistants were working on this scheme from March 3 until the plans were deposited with the L.C.C. at the end of May.

Mr. Douglas Scott, architect and surveyor, of Bedford Row, London, member and secretary of the Practice Committee of the Royal Institute of British Architects, said he had seen the plans, &c., prepared by the plaintiff and the latter would have been entitled to charge £2,015 according to the scale.

Mr. William Cannell, giving evidence for the defence, said he was general manager of Gwynnes, Ltd. He always made it clear to Mr. Thomson that his company never intended to put up a building costing £96,000. What they had in their minds was a sketch plan showing what the cost would be. Then, when they found the cost of what was proposed would be £30,000 that was an end of it and all the defendants thought about afterwards was a small stores building. He never gave Mr. Thomson instructions to go to the L.C.C., except in the early stages for the purpose of getting information.

The hearing was adjourned and resumed on Friday.

His lordship then conferred privately with Counsel on both sides, as a result of which Mr. H. H. King, for Gwynnes, Ltd., said his clients never had any desire to do anything that was not quite fair and equitable and in view of the opinion his lordship had formed he (Counsel) would not wish to resist it.

His lordship said that was a very satisfactory conclusion to a dispute between two perfectly honourable gentlemen and he thought there had undoubtedly been a misunderstanding upon one side or the other. He would give judgment for the plaintiff against Gwynnes, Ltd., for £750, less the £105 paid on account—£645—with costs.

Correspondence.

"Architecture"—The Paper.

To the Editor of THE ARCHITECT.

SIR,—If your correspondent wrote to you from Uganda in October last he must have done so without seeing the first issue of "Architecture," which was published in November, and if he is in fact a member of the Society, there appears to be one of two courses open to him, either to withdraw from it or to admit that his communication to you was based upon some misapprehension. It is an ill bird that fouls its own nest, and an ill-bred one that does so in public without first warning the other occupants.

Yours, etc.,

C. McARTHUR BUTLER,
Secretary of the Society.

Society of Architects, 28 Bedford Square, W.C.1.

[We read our correspondent's letter as an objection to a professional society's issuing a Journal to the public, and thus competing with the ordinary "trade publications" as a rival in the hopes of gaining outside support and circulation. If we are right in our view, there is no reason why our correspondent should wait for the first number of the Journal before criticising what is or is not right in principle.—ED.]

R.I.B.A. War Memorial.

To the Editor of THE ARCHITECT.

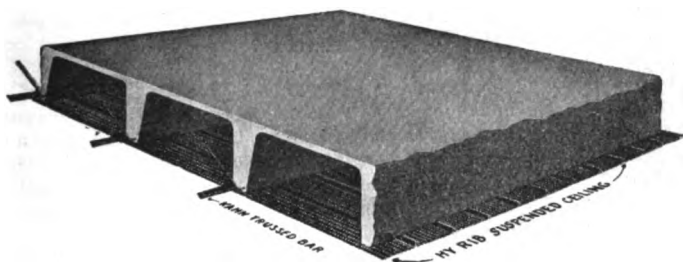
SIR,—I imagine there will be only one opinion as to the general artistic merits of the R.I.B.A. War Memorial. At the same time I imagine that there will be only one opinion as to the advisability of picking out the lettering, so that it may be possible to read with some degree of ease and comfort the names of those who have paid the price of glory.—Faithfully yours,

PERCY L. MARKS.

10, Matheson Road, W.14.
November 22, 1922.

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New Books.

"Modern Cabinet Work, Furniture and Fitments." By Percy A. Wells and John Hooper. Third Edition. B. T. Batsford, Ltd. 25s. net.

This is a deservedly popular book of which the first edition was issued in 1909, and reprinted in 1911, while a second edition was printed in 1918 to be followed by the third edition, before us, which has been brought up to date by the inclusion of further matter and illustrations. It is divided into 17 chapters, of which the first is a general introduction; 2 deals with tools and appliances; 3, with drawing, geometry and design; 4, joints and their application; 5, workshop practice; 6, framed-up work and tables; 7, carcass work; 8, bedsteads and other furniture; 9, veneering and marquetry; 10, foremen's work; 11, notes on the historic styles; 12, constructional and decorative brasswork; 13, machine tools and machining; 14, panelling of fitments; 15, special furniture for shops and offices; 16, chair making; 17, English, foreign and colonial woods. The history of cabinet making is the latest chapter of the development which has taken place since the carpenter dealt with all branches of constructional woodwork. The joiner was an intermediate stage in this development, and as the joiner took over many of the duties previously falling to the carpenter, so the cabinet-maker's work is a further refinement and amplification of the more delicate and intricate problems which were formerly handled by the joiner. The date of the art of the cabinet-maker is therefore more modern than that of the two crafts from which it has been developed, and has coincided with the more extensive use by tools and machinery which at once contributes a danger and an advantage—a danger because the all-important question of individual design may be lost sight of; an advantage because effects in design are made possible which were out of the reach of craftsmen in more primitive times. The best cabinet work must, as in the past, bear clear evidence of the skill of the individual designer rather than that of the factory, and it is greatly to be hoped that in the future craftsmen will work together in small associations with a view to preserving the individuality of their work rather than becoming mere units in greater manufacturing combinations. Though much of the country-made work of the past was crude in finish compared with the mechanical perfection of to-day, it excelled it in character and distinction, and in cabinet making there is a great opening for men who are designers of the work they execute. To be this it is necessary that the cabinet-maker's education should cover design as well as construction, and the popularity of this work is due to the fact that it forms an introduction to the field of design as well as to that of construction. Almost every page of the book is illustrated with clearly-drawn scale diagrams which accurately illustrate the processes described and those who have mastered the contents of this book will have a clear conception of the great scope of the work which is open to those who master the craft of the cabinet-maker.

"Details of Scottish Domestic Architecture." A series of selected examples from the sixteenth and seventeenth centuries of stonework, woodwork, furniture, plasterwork and metal-work, with descriptive text by James Gillespie. Published by the Edinburgh Architectural Society. George Watson & Sons, Ltd., Edinburgh. £2 12s. 6d. net.

This is a series of 124 plates of measured drawings of old Scottish domestic work which have presumably been measured by members of the Edinburgh Architectural Society.

Stevenson, in writing of the foreigner at home, emphasised a great truth, for the old work to the north of the Tweed is to an Englishman that of a foreign country—indeed, it may be questioned whether there are not closer affinities between our work and that of the Continent than there are between the work of the North of England and Scotland. The examples selected for illustration give a good idea that intermediate phase of Scottish architecture between the close of the mediæval church-building era and that which followed towards the end of the seventeenth century, when the buildings of England and Scotland were dressed more or less alike in the prevailing type of the developed Renaissance.

The phase of Scottish architecture shown in the volume bears evidence of the strong French influence which marks Scottish architecture, the greater Scottish houses bearing a striking resemblance to the architecture by François I. and Henri II. cast in a rugged vein than their prototypes. There is much of the same note of phantasy in detail and the concentration of ornament at points rather than in its general diffusion over the whole building.

The book is one which is both interesting as a study of type, and may well be of great value to those of our architects who are called to express themselves on Scottish soil an opportunity which, we might add, does not fall to the lot of many among our ranks!

"Northern Italian Details, Drawings and Photographs." By Walter G. Thomas and John T. Fallon, with an introduction by John Mead Howells. The U.P.C. Book Company, New York.

This is a useful collection of 143 plates of Northern Italian architectural detail which are shown by clear measured drawings and photographs. Mr. Howells states in his introduction that we are encumbered with books which are "half guides, half travelogues or picturesque rhapsodies kept neither within a classification of style or chronology," while the place for the present volume is in the architect's office, to be used for purposes of suggestion.

The examples illustrated have on the whole been well chosen, though it might be emphasised that Italian Renaissance Architecture can less than almost any other be studied as a collection of bits. Useful and interesting as many of the illustrations are, we should think that a similar collection of plates selected from Letarouilly would form a reference of even greater value in an architect's office.

Numerous as are the latter-day architectural publications there is still room for those who would select the best examples from many of the ponderous works of the last two centuries and produce them in a more convenient and portable form.

"Architectural Building Construction." By Jaggard and Drury. Vol. I., 20s. net; Vol. II., 15s. net. Cambridge Technical Series. Cambridge University Press.

The authors of this new work on building construction emphasise the view that the student is more likely to acquire knowledge if the various details of construction described are those to be found in a complete building and originally intended to select one building for this purpose. This was not found practicable, but in the first volume two buildings, a cottage and a small workshop, are chosen as types, and scale drawings are given of these in a pocket attached to the cover of the book. In the second volume a similar procedure is adopted, the buildings taken being a house and a warehouse. The procedure is then to deal with each item of construction as it would arise in the actual order of building. The two volumes are considered as being suitable for 1st and 2nd year students in the architectural schools, and there is unquestionably much to be said for the method adopted. A third volume, not yet published, is to deal with more advanced problems, and will be illustrated by examples from actual buildings of merit. The authors illustrate their subject mostly by isometrical diagrams, which they think are clearer than plans and elevations. As to this, we are not wholly in agreement, as the first problem of a student is to learn the meaning of plan and elevation, and this being mastered at the outset, we should be inclined to say that geometrical plans and elevations constitute the clearest method by which construction can be shown.

These useful books partially, but not wholly, meet a want which is a method of making construction as interesting as what we call design. This can only be done by treating it in the same historical manner, devoting illustrations and explanation specially to past construction. It is true that by so doing the student would not acquire the knowledge he immediately wants as quickly as by the methods adopted, but it would, we believe, serve as a greater stimulus to the imagination and interest of the student who in the end would not regret the greater length of the road to knowledge.

"A Text Book of Theodolite Surveying and Levelling." By James Park. (London: Charles Griffin & Co., Ltd. Fifth Edition.)

Though we entirely agree with the author, when he writes that "the art of levelling cannot be learnt from reading, and a week in the field is worth a month of lectures," yet as a complementary adjunct to such field exercise, we can most heartily recommend this well-elaborated text book. And Mr. Park does rightly in referring to the "art" of levelling, for whilst everyone will accept as a matter of course its scientific character, many may fail to recognise its claim to be an art, for, as Mr. Park further remarks, "The surveyor must possess a shrewd knowledge of contours and surface forms, and have what is aptly termed



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an eye for country." The work was first published fourteen years ago, and is likely to have a long lease of existence. Advantage has been taken, in preparing a new edition, to add numerous worked-out examples of problems in field astronomy and observations for azimuth, time and latitude with a five-inch theodolite.

The author very sensibly avoids giving elaborate descriptions of instruments, holding the view (and one we always advocate) that students gain more real knowledge by seeing, handling and using than by the process of reading. We venture to doubt the accuracy of the contention that there is obviously no sag when a steel measuring band is held vertically. We need not doubt that the author will appreciate having his attention drawn to any errors which we may have noticed, and these may be taken seriatim:—On page 39 the half-diagonal of square should read 353.5, and the logarithms below need revision, as, indeed, so also do those on various pages. Mr. Park refers to Chambers' well-known standard publication, but it is obvious that in many instances the logs must have been taken by means of a slide rule, thus obtaining merely approximations where non-integral figures are concerned; but even with some integrals there are errors, for the log. of 233 (page 39) and that of 565 (page 104) are incorrectly given, though on page 103 the log. of the latter number is correctly entered. On page 123, in last column of the Table, 372 links should read 375, and similarly a digital correction is necessary in each division of the column. On page 136 the *Example* is evidently meant to show 1.6, not 16 poles. On page 192 the reference should read as to page 191, not 178. We might finally draw attention to the literary inaccuracies on page 126, the name of the famous architect being Pollio, not Pollo, and the Emperor Augustus being the *first*, not the *second*, emperor of Rome.

"Architectural Students' Handbook." By F. R. Yerbury. (London: Technical Journals, Ltd. 10s. 6d.)

The study of Architecture is of a very different complexion in these days to the course advocated by Marcus Vitruvius Pollio; but the lapse of nineteen centuries has merely brought about a certain change of pabulum; and the lot of the student is still one which is overburdened with the mass and variety of what he (or she) is recommended to assimilate, in order to attain the status of the perfect architect.

Mr. Yerbury, from his position as Secretary of the Architectural (London) Association, is well equipped to produce such a useful little guide as the handbook now before us. The Association and kindred institutions have done excellent work in the training of architects, but yet it is well to remember that many successful practitioners (we will for the moment disregard geniuses) have arisen without such facilities for study made easy. The benefit of Mr. Yerbury's handbook lies in its inclusion (within reasonable compass) of so many fingerposts, indicating to the student in what directions he may seek and find what he needs. But it may well be pointed out, as the author says, that whilst much can be learnt from books, none of these will teach so much as experience. His advice to concentrate attention at museums upon one section at a time, instead of wandering casually through numerous galleries, is excellent. The series of plates showing various types of draughtsmanship and illustration is of great value.

"Architectural Drawing." By Wooster B. Field. With an Introduction and an Article on Lettering by T. E. French. (New York and London: McGraw-Hill Book Co., Ltd. 20s.)

It is ever a matter of speculation to what extent students are prepared to consult textbooks in order to learn the art of draughtsmanship; for the science of draughtsmanship they may consult a textbook perhaps, but *c'est autre chose*. Are we to suppose that Mr. Field himself learnt to draw from a textbook, or is it not much more probable that he was taught, firstly, by an instructor at home or in school, and subsequently in an architect's offices? But still, if there are any who desire to act as auto-instructor, then such a work as the one now under consideration may well be recommended for the purpose. The general scope and treatment are both to be approved, and the series of plates with their well-prepared diagrams are features of the highest value. Mr. Field as a professor of engineering drawing writes with a mastery of his subject that leaves very little room for animadversive criticism; and if advantage is taken of reviewing the book to offer a few such remarks, it will be evincing the truest interest in the work itself.

On page 5, in explaining oblique drawing, it should be made clear that the lines drawn at an angle must all be parallel; that is, instead of "any desired angle," it should read "any one desired angle." The value of illustrating drawing instruments may be entirely discounted, text descriptions being quite

adequate. So, also, may the desirability of perspective sketches being submitted in competitions. If the living-room is to be the principal apartment, it should be given a south-east outlook instead of direct south; whereas a dining-room, if for evening use, may preferably have a south-west aspect.

Throughout a long life the shadow of a *point* has never yet come within my purview, and, indeed, it may be added that the pages anent shades and shadows are none too perspicuous. The fireplace sections on Plate 61 cannot be recommended for adoption. On page 109, what the author designates "scamilli" are usually known as the "hypotrachelium"; and what he calls the "hypotrachelium" is the "trachelium" or "necking"; nor are his remarks upon the Composite Order altogether accurate. But these are trifles.

New Catalogues.

We have received from the General Electric Company, Ltd., Magnet House, Kingsway, a copy of a new edition of their catalogue Section P.7, dealing with small electric lighting sets suitable for country houses, bungalows, etc. This catalogue gives full particulars and prices of both belt-driven and direct-coupled sets, which can be supplied either as separate units or complete with switchboard panels and accumulators. Fully dimensioned drawings, showing the lay-out of typical plants and full instructions for operating the sets, are incorporated in the catalogue, copies of which can be obtained on application to Magnet House, or any of the company's branches. Leaflet F 2840, issued by the same company, announces substantial reductions in prices of Equiluxo glassware, of which substantial stocks are now being carried.

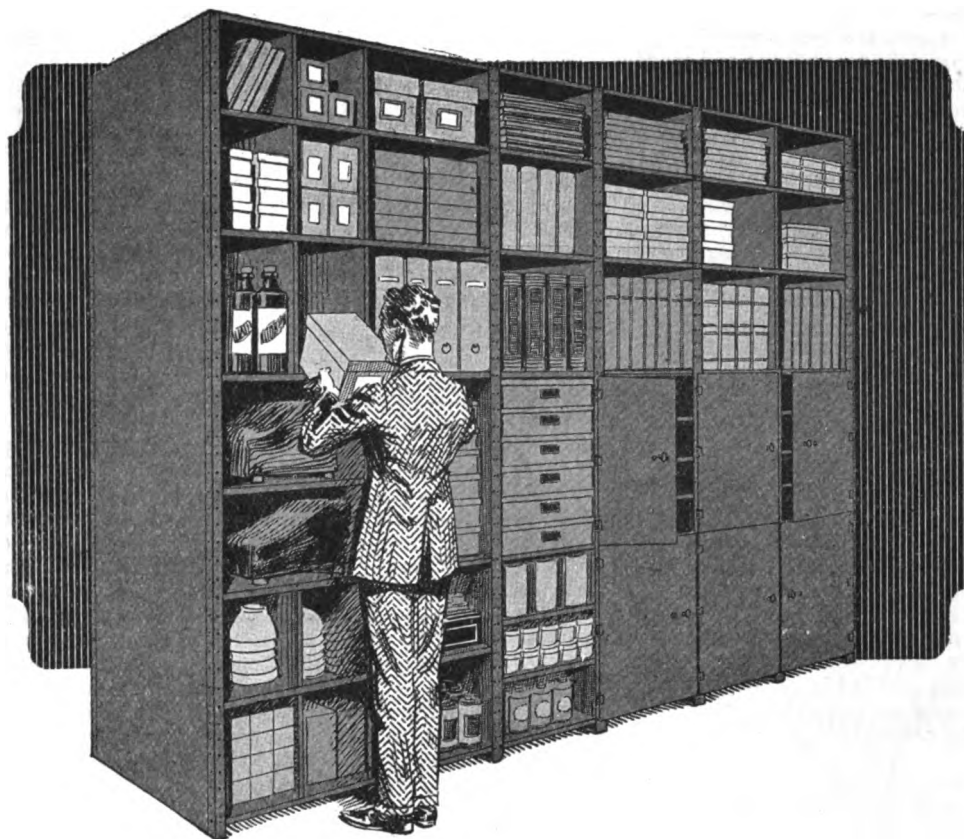
National Radiator Co., Ltd., Hull, have issued two new leaflets for insertion in their current catalogue, giving particulars of the Nos. 3 "H" and 3 Britannia series water boilers. These are additional sizes in continuance of the Nos. 1 "H" and 2 Britannia series boilers, and are designed on similar lines, presenting the same advantages and improvements over the earlier types. The manufacturers will gladly forward copies to architects or trade firms who have not already received same.

The Redaluma Paint Co., Ltd., 1, Lloyd's Avenue, E.C., have prepared two leaflets setting forth the merits of their "Alredma" (oxide of aluminium) anti-corrosive paint, which is recommended for use as a substitute for red lead on any kind of iron, steel, brick or woodwork, cement or concrete. "Alredma" has a remarkable covering capacity; for example, 1 cwt. covered 1,200 sq. yards of sheet iron, whereas 2½ cwt. of red lead and 1½ cwt. of red oxide were required for the same area. "Alredma" paint goes about 14 lb. to the gallon and every drop is usable. Red lead and red oxides go about 28 lb. to 23 lb. to the gallon with a varying wastage in their settling and hardening, both in the mixing tub and the paint pot. At present it is made only in two shades of red—other colours are being experimented with.

J. H. Sankey & Son., Ltd., Canning Town, E., and 74, Cheap-side, E.C., have issued a fresh booklet descriptive of "Pyruma," their fire cement with 101 uses. This material has proved itself to be suitable for setting, jointing, pointing and repairing all kinds of firebrick work. It is made in two grades, coarse and fine, the latter being in putty form for temperatures up to 1,400 degrees cent., and in tins, kegs or casks according to quantity. "Pyruma" has its uses in connection with domestic fireplaces no less than with the factory furnace. It sets as hard as Portland cement, and gives a fire resistance equal to that of the finest fireclays.

Fredk. Braby & Co., Ltd., "Eclipse" Works, Glasgow, have just perfected a power-driven tyre pump, which should eliminate one of the drawbacks of motoring—the fatiguing exercise of inflation. These pumps are arranged to be fitted at the side of the engine, either bolted direct to the chassis or secured by means of a steel trap. The standard method of driving is by means of a leather link belt and an extra pulley either on the fan shaft or on the fan shaft drive, and as they will run equally well in either direction, they can be fitted in the most convenient position on either side of the engine. The price of a complete "Eclipse" pump is £5 10s.

Messrs. W. & J. H. Oldaker, Trinity Street, Smethwick, have produced a handsome catalogue, illustrative of their work as makers of steel and bronze casements and gates. Other departments of the firm (which was established in 1889) include leaded glass, light constructional work, architectural metal work, etc. Particular attention is drawn to their patent side-hung cleaning casement as being, perhaps, the best casement of that sort made. Various types of casements and sash sections are illustrated as well as stay bars, handles and handle plates.



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The Metal Filament Lamp Industry.

At the opening meeting of the Illuminating Engineering Society, held last week, the following report on "The Position of the Metal Filament Lamp and Fittings Industry at the Present Time" was presented by the Committee on Progress in Electric Lamps and Lighting Appliances (Mr. S. H. Callow (chairman), Mr. J. E. Edgcombe, Mr. J. W. Elliott, secretary, Mr. J. Y. Fletcher):—

The past twelve months has been a period of steady progress for the electric lamp and fittings industry, and one of considerable interest and activity. December last witnessed the conclusion in the House of Lords of the long-drawn-out litigation concerning the gasfilled patent, which was there unanimously declared to be valid and of great commercial value.

The research laboratories and testing departments of the various manufacturers have been very active in research and experimental work, with the result that the quality of electric lamps, particularly of the gasfilled type, has been considerably improved. Furthermore, standardisation has progressed, and it is hoped shortly to issue complete specifications (on the lines of those now existing for the vacuum type lamps) covering all the various types of electric lamps manufactured, under the auspices of the B.E.S.A.

The manufacturers, always desirous of cheapening electric lighting with the idea of assisting to popularise its use, reduced, in some cases very considerably, the prices of electric lamps in September last, bringing such prices below pre-war level. This action was made possible, not by decreased labour and material costs, which naturally remain very much higher than in pre-war days, but by improved machinery and manufacturing methods.

Last year we were able to state that 100/130 volt 40 watt and 200/260 volt 60 watt gasfilled lamps had been introduced, but a further advance has since been made by the placing on the market of 100/130 volt 30 watt and 200/260 volt 40 watt gasfilled lamps.

These lower voltage gasfilled lamps with the particular form of concentrated filament are being used on board ship for saloon lighting and are also coming into general use for domestic lighting.

There has been an increased demand recently for special types of lamps, such as candle types for electroliers, etc., and double-ended tubular lamps for shop-window and cornice lighting, and all such requirements can be satisfactorily met.

Noticeable developments in the case of gasfilled lamps are, firstly, the special lamps with opal bulbs, which are meeting with much favour for shop-window lighting, and in such positions where the light from the lamp is almost on the eye level; secondly, the daylight lamp which has a spectrum closely approximating to that of daylight, and is suitable for colour matching, dye works, drapery shops, etc., and also in art schools, picture galleries, etc.; thirdly, considerable progress had been made with the projector type of gasfilled lamp, suitable for cinematograph work and special forms of flood-lighting.

During the last two or three months a steady increase in demand has been noticed as compared with the same period last year, and electric lamp manufacturers are looking forward to increased business, being in a position to meet all demands without in any way depending on foreign supplies of raw material.

The manufacturers of electric fittings, who naturally work in close co-operation with the lamp manufacturers, have always quickly responded to any developments on the lamp side, by placing on the market scientifically designed fittings and adaptations to meet their requirements. The fittings manufacturer, in common with the lamp manufacturer, has necessarily to bear an additional financial burden in the first experimental stages, and new processes of manufacture are necessarily costly.

The present variety of shades and reflectors scientifically designed to cover all types of electric lamps has given to the consumer a wide range for selection, and most patterns are readily obtainable from stock. Amongst other new designs of glassware for use in connection with electric lamps may be mentioned a new bowl fitting having a clear glass canopy all moulded in one, which, whilst having an appearance similar to the ordinary bowl fitting, is practically dustproof and, therefore, eliminates the greatest objection to the open bowl.

A Ministry of Health inquiry was held last week at Chesterfield into an application by the Corporation to borrow £66,795 for the purpose of developing their water bore-hole schemes at Hunger Hill (400,000 gallons per day), Whispering Well (500,000 gallons per day), and Holmebrook (100,000 gallons per day).

Canon Alexander will give an address on "St. Paul's and its Builder" at the Church of St. Dunstan's-in-the-East on December 5, at 1.10 p.m., with special reference to the approaching bicentenary of Sir Christopher Wren.

Birmingham Architectural Association.

The second general meeting of this Association was held on Friday, November 17, at the Society of Artists' Rooms, Birmingham, when Mr. W. P. Bloye read a paper on "The Failure of Modern Sculpture and the Remedy."

Mr. Bloye commenced by saying that sculpture, or the art of cutting things in stone is looked upon nowadays as, in the first place, a luxury, and in the second place a something to be made just as the client wants it, and not as an expression of what the sculptor feels.

The art of the so-termed Classic period obsessed the intellectual people of the last century. The technical accomplishment of the Classic sculptors gave a sort of material beauty, and the reason it appeals to the greater masses of to-day is because it approaches very near to the aspect of to-day. It is the awful sense of realism that puts them below their archaic predecessors.

The present awakening of interest in the work of the archaic periods is not a fashion, but a genuine reaction against the soulless and commercial art of modern Europe. Art is not as some people think, a limitless expression of anything you choose to do; too much liberty can easily become a hindrance.

The substance of a work of art is its spiritual quality first, its material quality second, and its subject quality third. By spirit we mean faith or truth; you cannot kill it, but the right spirit can only exist in service. The spirit of the best work is truth, and with truth comes force, while the spirit of the great majority of modern art is profane. In the main our failure is due to the lack of understanding of our materials. The fact of material in sculpture should run through the whole of it, arranging, governing, and reigning over every portion of it. In all great buildings we see this feeling, and it has come about because everyone who had any part in the making of it was always subjected to the special sense of the particular material used.

Under present day methods, all who are working on a building are subject to the demands of the average architect, who is prone to forget that sculptors require at least as much training to do their job as the architect requires to do his. Knowledge is based on actual experience and experiment, and the only way to know what is right in stone is to go and carve it.

The right and good is the common property of all good architects and sculptors, and when such men combine good work will result.

Sculptors have, in the majority of cases, entirely forgotten the part material plays in their work. To bring the matter to a finer point, their failure is due to the fact of the clay model lying behind everything that is done.

The word "cut" is surely the reverse to the word "model," or in other words, the thing from which you cut away must have an entirely different character from the thing to which you add.

Clay is the root of the evil of modern sculpture. It should only be used for work to be cast, for clay to be fired, and, to a very limited degree, for the furthering of one's knowledge of form. It is all a matter of finding out the way in which the best has been done, and doing it. The sculptor must be made entirely responsible for what he does, and must be given, within limits, a free hand.

If architects, at the commencement of a design for a building where sculpture is required, would consult a sculptor, both would benefit greatly.

At the conclusion of the paper, which was illustrated by many lantern slides, a vote of thanks to the lecturer was proposed by Mr. H. W. Hobbiss, seconded by Mr. A. L. Snow, and carried unanimously.

Preservation of Stone Buildings.

At the Royal Academy on Wednesday, November 22, Professor A. P. Laurie, D.Sc., delivered the last lecture of his chemistry course, his subject being "The Preservation from Decay of Stone on Buildings."

The Professor dealt with the general causes of stone decay, and showed by experiments the distinctions to be made between limestone, sandstone with a calcite cement, and sandstone with a silica cement, and described the different methods necessary to make complete laboratory tests with a suggested preservative, and illustrated by photographs some of the difficult problems which have to be faced.

The Professor then described a new preparation which he had recently discovered and which deposits hydrated silica as a cement between the particles of the stone and stated that, while not solving the problem of the preservation of limestones, he had great hopes that it would prove successful in the preservation of sandstones, and described the experiments he had made and was at present engaged on, with this preservative.

Professor Laurie further suggested that as it is an entirely new preservative it might be worth while for the Royal Institute of British Architects to experiment with this new material.



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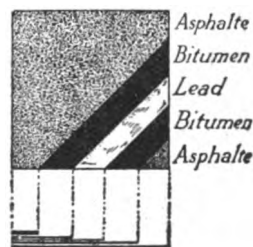
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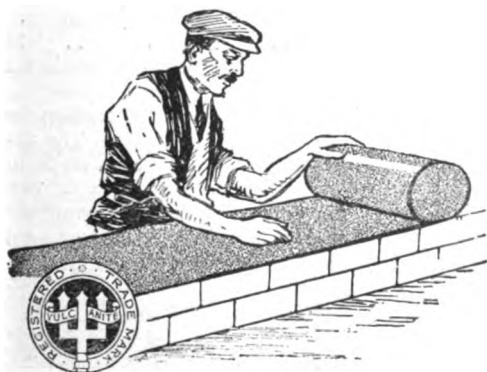
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The Empire Stadium at Wembley.

Twenty-five thousand tons of concrete are being used in the construction of the Great Stadium in the grounds of the British Empire Exhibition at Wembley.

Some idea of the magnitude of this great engineering work is conveyed by a statement, just completed by Mr. E. O. Williams, the Consulting Civil Engineer, showing the total of all materials used. These totals, when the Stadium is completed, will be:—

1,400 tons of structural steelwork.

Half a million rivets (for which one and a half million holes must be drilled).

600 tons of steel rods for reinforcing the concrete.

Total length of these rods is about 500 miles, and the total number of the rods one-quarter of a million.

25,000 tons of concrete (using 3,500 tons of cement).

40 miles of terracing.

14 miles of concrete beams to form the terracing in the stands.

In addition, 150,000 tons of clay have been dug up—chiefly by the 2-ton drag-line excavator—and redeposited for levelling-up purposes to form part of the terracing.

The outside wall of the Stadium is half a mile round, and, apart from the main exhibition front, it is composed of 37 arches, each 45 ft. high, with a 50 ft. span.

These arches, placed end on end, would stretch from Westminster Bridge to Charing Cross railway bridge.

It is of interest to record also the fact that in the preparation of the football arena, besides the 5½ in. of turving soil on the 10 in. foundation of ashes and clinker, the workmen laid on this a total of 76,250 turves, each measuring 18 in. by 12 in. and 2½ in. thick.

General.

Mr. George W. Martin, M.Inst.C.E., etc., announces that he has removed from Great James Street, Bedford Row, to Sentinel House, Southampton Row, London, W.C.

The York City Council on Monday last decided to proceed with their housing programme on the Tang Hall estate on which 201 houses, out of the 400 contemplated, have been completed. Birmingham Relief Works.

A Students' Evening, arranged by the Board of Architectural Education, was held at the Exhibition of Architects' Working Drawings in the Galleries of the R.I.B.A., 9, Conduit Street, W.1, on Friday, November 17. About sixty students attended, and the various exhibits were inspected and discussed. Mr. C. H. Gage (F.) and Mr. G. Gilbert Scott, R.A. (F.) had consented to be present, and they explained respectively the points of interest in the Royal Automobile Club, the New Catholic Church, Northfleet, and in the Memorial Chapel, Chester Cathedral. Arrangements have been made for holding the exhibition each year. Work representative of all classes of architecture will be exhibited.

At a meeting of the Hull Corporation Housing Committee on the 20th inst., the report of the deputation to the Minister of Health was read. The deputation were concerned with the erection of fifty new houses on the North Hull site, and tenders put forward were rejected by the Ministry as being too high. The Ministry suggested that slate roofs should be used instead of the proposed Marseilles roofing. This procedure, however, would have meant an additional £8 on the price of each house. It was agreed that further tenders should be invited. The deputation report was also read concerning the 74 houses to be built in West Hull with Corporation money. The Ministry of Health were approached on the subject of a subsidy. They reported that as only 100 houses remained to be subsidised under the subsidy scheme, it depended on the Hull Council as to what should be done. If the Council agreed to erect 74 houses on the Hessele Road site, the Ministry would consent to earmark 25 of the 100 houses remaining for subsidy.

At the last meeting of the Glasgow Town Council objection was taken by Mr. Shaw and other Labour members to a proposal to put in force a scheme introduced experimentally by the Director of Housing under which the output of the concrete block-making plant at Sandyhills had been increased by 700 blocks per week over the standard of 660 blocks per day of eight hours, a bonus of 4d. per pull being made for all work done over the standard output. Mr. Shaw said the scheme was equivalent to adding one day and two hours to the working week; and he asserted that the tailoring and cabinet-making trades had become sweated industries by the introduction of payment by results. The building trade unions, he added, were in earnest in their objections to the Sandyhills proposal, and if the Corporation wanted to get on with their housing they would take the matter

back for further consideration. The Convener of the Housing Committee could not see his way to agree to the suggestion. There was, he said, no desire to break trade union rules, and the men were willing. By a large majority the proposal was adopted.

At the monthly meeting of the Incorporated Church Building Society, held at 7, Dean's Yard, Westminster Abbey, on the 16th inst., the Hon. Sir E. P. Thesiger, K.C.B., in the chair, grants were made towards building the churches at Long Eaton, St. John, Notts, £200; Ventnor, St. Alban, £200; rebuilding Layer Breton Parish Church, near Colchester, £50; and towards enlarging or repairing the churches at Cowden, St. Mary Magdalene, Kent, £15; Garton-in-Holderness, St. Michael, Hull, £20; Gunnersbury, St. James, £50; East Lulworth, St. Andrew, Dorset, £15; Selly Oak, St. Mary, Birmingham, £50; Shepreth, All Saints, Cambs, £25; Ravenhead, St. John the Evangelist, Lancs, £50; Wardington, St. Mary Magdalene, Oxon, £100; Wilmington, St. Michael and All Angels, Kent, £65; and Wolverhampton, St. Paul, £125. Grants were also paid for various works completed. In addition to the above, £1,105 was paid out of Trust Funds towards small repair to 38 other churches. The Society likewise accepted the Trust of a sum of money as a Repair Fund for Holy Trinity Church, Felin Foel, Carmar. The number of applications dealt with at the meeting indicates a considerable increase in church building and repair.

The Department of Overseas Trade has received from the Office of H.M. Senior Trade Commissioner in South Africa a copy of the form of Agreement and Schedule of Conditions which has been approved by the following South African Associations: Association of Transvaal Architects, Natal Institute of Architects, Cape Institute of Architects, Transvaal Institute of Architects, Society of Architects (London) South African Branch, Port Elizabeth Society of Architects, Orange Free State Institute of Architects, South African Institute of Quantity Surveyors, National Federation of Building Trade Employers in South Africa. It may be stated that the Orange Free State Institute of Architects has newly been formed and completes the series of provincial bodies. This form of agreement is the outcome of very careful consultation between the associations named. It contains in its closing paragraphs certain clauses on arbitration which may be of interest. Copies can be obtained on application to the Registrar of the Association of Transvaal Architects, P.O. Box 2266, Exploration Buildings, Johannesburg, at 6d. per copy. The copy in the possession of the Department may be seen by interested United Kingdom firms on application to Room 42, 35 Old Queen Street, London, S.W.1. (Reference 9692/E.D./M.P.).

Birmingham Relief Works.

A number of unemployment relief works, approved by the Birmingham City Council, have received the sanction of the Government departments concerned. When the work is actually commenced employment will be provided for about 3,700 men weekly. The total cost of the schemes approved is £607,638, being 68 per cent. of those authorised by the Council.

In a report presented to the General Purposes Committee, on the 20th inst., the Unemployment Sub-committee stated that sanction had been obtained for the following schemes:—

| | £ |
|---|---------|
| Asylums Committee.—Bridge connecting Rubery and Hollymoor Mental Hospital | 2,000 |
| Drives at Rubery Mental Hospital | 5,065 |
| Baths Committee.—Willis Street Cottage Baths | 9,149 |
| Grosvenor Road Cottage Baths | 7,696 |
| Saltley Swimming Bath | 23,448 |
| Public Works Committee.—Sewerage Schemes | 146,250 |
| Road and Bridge Schemes | 268,530 |
| Salvage Committee.—Brookvale Road Destructor | 100,000 |
| Water Committee.—Road at Frankley | 15,500 |
| Watch Committee.—Fire Station at Aston (subject to satisfactory tenders) | 30,000 |

The number of men actually engaged on relief works for the week ended November 10 was 641.

The committee have been unable to obtain sanction for the payment of the full trade union rate of wages. The Council instructed that strong representations should be made to the Unemployment Grants Committee for permission to pay the full trade union rate of wages to unskilled men employed on direct labour schemes, and, failing this, permission to request the Government's sanction to the Corporation paying the balance out of the city funds. This has been done, but the Unemployment Grants Committee have replied that they regret they do not feel able to assent to either of the proposals submitted.

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Modern Decoration.

The production of two books on Modern Design raises the question of whether there is, or is likely to be, such a thing as modern design in decoration. Had we lived in the Louis XV. period, we might with much justice have claimed that we had evidence around us to show that an entirely new phase of art had been originated by contemporary designers, a phase which stands alone as an instance of the invention and adoption of new forms in art. In other cases in the past when one phase of art has been succeeded by another we have examples of the use and very gradual development of one form out of another, but in the Louis XV. style we have an instance of what may be termed deliberate revolution, the adoption of asymmetrical instead of symmetrical form in details of ornament—in a word, an æsthetic upheaval cleverly combined within the broad limits of Renaissance art.

It would be at once interesting and instructive to know who first originated the fundamental elements of the style, but all we know is that it was the work of a few gifted designers, and became the dominant phase in French art until it was replaced by the Louis XVI. style, a reversion to more classic and stereotyped forms. But, whether used in decoration or furniture, it is a standing proof that much of our modern theorising on the subject of logic in decoration and design is fundamentally unsound, for it affords a proof that æsthetic satisfaction can be derived from pure abstractions of form which convey no structural meaning, but yet give a distinct æsthetic satisfaction. Though the Baroque architecture of other countries is often very similar to that of the Louis XV., we can trace in it the gradual process of evolution which is absent from the French counterpart, nor can we judge how far the Baroque of other countries was influenced by the example of France.

Mr. Townsend's book * is illustrated by 174 examples of design, many of them being exceedingly well produced in colour, with short introductory notices of each section of design. William Morris and Walter Crane naturally figure very prominently among the designers whose schemes are illustrated, and many examples show the work now being carried out by the great commercial firms of the day; but when all is said and done we are left with the general impression that in a large majority of cases we should feel more satisfied with plain colours framed within architectural lines than with the wealth of pattern now being produced by designers and firms, and we further feel that the work illustrated shows that we are simply ringing the changes on the work which has come down to us from the past. Neither in colour nor general richness of effect does there seem to be anything which gives the same sense of mastery over the problem of colour which is frequently found in an Eastern rug or carpet made by the modern descendants of generations of craftsmen working out similar problems without the aid of anything but an old tradition unconsciously followed.

* "Modern Decorative Art in England," by W. G. Paulson Townsend. Vol I., "Woven and Printed Fabrics, Wall-Paper, Lace and Embroidery." B. T. Batsford, Ltd. 25s. net.

The Year Book of the Design and Industries Association † contains an introduction by Mr. C. H. Collins Baker, the Keeper and Secretary of the National Gallery, who tells us that the Association was formed to combat the unpractical influences in British design and industry, and that an attempt to secure "fitness for purpose" is their aim. The book gives examples of modern furniture, crockery, kitchen equipment, and printing; but though we gladly recognise the great improvement in construction and workmanship which marks the best modern work of the day, it is often spoiled by an intolerable note of affectation.

Simplicity is often carried to an absurd point, and some of the work illustrated would suggest that medical cranks had a controlling voice in design.

One of the great beauties of old furniture is usually the delicately designed cornice of cupboards and chests, but the modern craftsman apparently takes an immense delight in shearing off what we suppose he considers as an excrescence, with the result that his furniture bears a general resemblance to a packing case. We are not quite compensated when, as is frequently the case, we get a minute pattern in colour or inlay running round the edges of doors or drawers, nor do we see the point of the elimination of moulded work or its very sparing use. The turner's craft was a considerable one in the past, and old furniture is frequently made interesting by its use. But in the new examples of modern craftsmanship, in spite of the fact that we have greater and not fewer appliances for woodworking machinery, all these things are taboo. We freely acknowledge the immense advance which has been made in the art of printing, and many modern productions are well up to the highest standards of the past.

But we think that better and more satisfactory results could often be achieved if the craftsman were content to copy old models, modifying them where it became advisable. If in the reign of James I. or Queen Anne the designers of the day had racked their brains to produce something new, the furniture which has come down to us would probably have a smaller value than it has to-day.

The desire to invent and to depart from precedent is the æsthetic curse of the time we live in, as is evidenced by this book.

The Design and Industries Association's Year Book illustrates the false ideals which permeate modern design. Mr. Townsend's book simply shows that many designers can with greater or less success compose patterns. The two books together emphasise the fact that there is no modern design that can be compared in merit with that of the past.

If we have a distinct revelation, as the French designers of the age of Louis XV. undoubtedly had, by all means let us impart it to an appreciative world; but until and unless that happens, let us not select forms for no better reason than that they may distinguish the work of to-day from that of the past.

† "Design in Modern Industry," the Year Book of the Design and Industries Association, 1922. Benn Brothers, Ltd.

Our Illustrations.

PALAZZO LERCARI-PARODI, GENOA. Drawn and Measured by L. DE SOISSONS, Architect.
 HOUSES AT NORTHAMPTON AND NEAR HATFIELD. P. D. HEPPWORTH, Architect.

Lockerbie War Memorial.

The design was selected in open competition, over a hundred schemes being submitted. Mr. George Washington Browne, R.S.A., acted as assessor.

The Memorial is placed in the main street, at the intersection of three separate roads.

The design consists of a simply treated pedestal of Dalbeattie granite, set on a raised platform stepped up at front. On each of the four sides there are bronze panels, three of these containing the names of the fallen, and the remaining panel being reserved for the dedication. Above each of these panels there is a simple bronze wreath. Surmounting the whole is a bronze figure of "Victory," the total height from street level being 22 feet.

The architect is Jas. B. Dunn, A.R.S.A., F.R.I.B.A., of Edinburgh; the sculptor, Henry C. Fehr, Kensington, London. Contractors for the granite work, Messrs. William Kirkpatrick, Ltd., Manchester; and for the bronze founding, Messrs. J. W. Singer & Sons, Ltd., Frome, Somerset. The Memorial was unveiled by Lady Zuchanan Jardine.

St. Mary's Church, Nottingham, War Memorial.

This drawing was shown at the Royal Academy Exhibition. We gave a plan and two elevational drawings of the same subject in our issue for January 27 last. The Cross and steps form a county memorial built as the main entrance to the parish church, at the junction of High Pavement and St. Mary's Gate, at Nottingham. The Cross, which is hexagonal on plan, stands in the centre of a wide flight of steps, flanked by stone piers and walls, in which are recorded the names of the fallen. At the top of the steps are wrought iron gates giving access to the churchyard. The Cross, which is of Whitby stone, stands up some 32 feet from the pavement level. The sword is of cast lead, and the panels in side walls of slate. The work has been carried out by Messrs. Thompson & Sons, of Peterborough, to the design of C. G. Hare and A. V. Heal (Messrs. Bodley & Hare), 11 Gray's Inn Square, W.C.1.

Notes and Comments.

Unemployment.

A recent article in the "Morning Post" very fairly and completely points out the root of our present difficulties. There are, it is pointed out, a million more people in the country than before the war, and both the cost of living and the wages of labour have been greatly augmented. As it would be undesirable and seldom possible to reduce wages, the only alternative is to increase production by harder and more efficient work, and this Labour, as a political party, sets its face against. Employers who in round terms could before the war pay their taxes by less than a month's work now have to pay the proceeds of something like four months' profits to the State in the form of taxation. The rates of exchange tell very heavily against our export trade, while emigration from the country is lower than it has been for a long period of years. In considering remedial measures it is necessary to discard those which would automatically intensify the evils they are apparently designed to meet. The ideal measures are those which would immediately, or in the near future, produce revenue, while those which necessitate further taxation while relieving immediate unemployment at one end would produce an even greater amount of unemployment at the other. It is to be hoped that among the means finally adopted some measure of emigration will be included; but here, again, the remedy may bring with it a danger. It is precisely those who are most valuable to the community here who would be welcomed in the Dominions, while many of those we might dispense with would remain behind. We do not envy the task of those who have to decide these questions, as at present it seems almost beyond the wit of man to suggest measures which may not do harm in some shape to the general community.

Dr. Addison's Retort.

Dr. Addison has very neatly scored off Mr. Jerrold Nathan's statement that the houses built by the Corporation at Ilford have cost £13,000 each. Mr. Nathan has, Dr. Addison says, omitted to explain that in stating the cost of the 220 completed houses he has added the cost of land for 2,000 houses, the cost of machinery and workshops for carrying out the whole scheme as well as roads, mains, sewers, service tramways, and the foundations of 400 houses, which were not proceeded with, and, in addition the loss of terminating the original contracts. Also Mr. Nathan was between 1919 and 1920 the advocate of the scheme which he now condemns. As Mr. Nathan is the chairman of the Special Housing Committee of the City of London he is not in a position to plead ignorance of the facts of the case. We have in the past consistently opposed Dr. Addison's schemes, but for that very reason we are

the more anxious to express our dissent from such wild accusations. But over-statements which cannot be substantiated, and are obviously both unfair and ungenerous, have a way of recoiling on those who made them and do harm and not good to any cause. We suppose Mr. Nathan will have some explanation to give which may put his action in a better light, but if not, there is obvious reason why he should make a public apology for what appear to be very gross mis-statements.

Modern French Houses.

An interesting article in the "Manchester Guardian" states that there is a revolt in French domestic architecture against the tasteless and meretricious travesties of bigger and more grandiose buildings which have hitherto passed muster and which are thus described:—

Each Norman castle, Swiss chalet, and old-English cottage unrecognisable this side the Straits, stands for a transaction in hard cash with which the shrewd bourgeois is satisfied. Many of the "improvements" in Parisian flats let at an exorbitant rent consist of a dark cupboard transformed into a bathroom, electric light in all the rooms, a general telephone in the concierge's room, white walls and ceilings with Louis XVI. glass panels let into the doors to simulate a fictitious impression of light and air, and white stucco adornments everywhere. The tenant grants that modern domestic architecture is not beautiful as were the old houses of his ancestors, but then "le confort moderne!"

The work of the new school of design is amusingly described in the following passages:—

Many fashionable Parisians have refurnished their salons according to the teachings of the new school, which are in direct opposition to the old French ideas of furnishing. The majority have compromised by mingling old and new; wall decorations and floor coverings are changed, low chairs introduced, old and new lacquer expected to merge with futuristic sculpture and old china in forming a harmonious whole. But enthusiasts determined on a root-and-branch destruction of every sign of the domestic, have banished chairs, substituting divans and tables of the same height.

Yet the general impression is one of restraint and restfulness, for design is subjected to the strictest discipline and the wall relieved from the tyranny of the framed picture. A deep blue ceiling and plain white walls form a setting for black lacquer furniture and bookcases with a suggestion of gold. A mirror of rare design in black and ivory reflects a red lacquer screen and couch, dark polished floors covered with a hand-made wool carpet, and one blue enamel bowl. A hint of sculpture in a modern bronze head finishes a room whose charm is meant to lie in its emptiness. Against the only background of a black-and-white lacquer table madame receives, in an ivory velvet gown whose trimming of scraggy monkey fur proclaims the fascination of ugliness. Her straight, black, oily-looking coiffure, highly-

coloured complexion, and strongly-accented lips and eyebrows are perfectly thought out to emphasise the spirit of the room.

We should be greatly interested to see examples of the new school of design apparently designed as a setting for the owner!

The Whitgift Hospital.

During the last 25 or 30 years attempts have been made from time to time by the Croydon Borough Council to sweep away Whitgift Hospital which has been resisted by a Whitgift Hospital Preservation Committee at Croydon, which in 1912 was the means of having a scheme adopted by the Borough Council that avoided any interference with the Hospital and received, for that reason, the approval of the (then) Local Government Board.

An attempt is now again to be made to remove these buildings or a great part of them, and a Bill is being promoted by the Croydon Borough Council for that purpose.

The Royal Institute of British Architects upon hearing of this has taken action and held a conference at which other bodies were represented and which after consideration of the whole question passed the following resolutions:—

“That this meeting convened by the R.I.B.A., and including representatives of the R.I.B.A. Art Standing Committee, the R.I.B.A. Town Planning Committee, the Whitgift Hospital Preservation Committee, the Society for the Protection of Ancient Buildings, the Town Planning Institute, the London Society, the London Survey Committee, the Surrey Archaeological Society, the National Trust for Places of Historic or Natural Beauty, hereby expresses its approval and support of the scheme adopted by the Croydon Borough Council in 1912 for road improvements in North End and Crown Hill, which by means of a widening on the western side opposite Whitgift Hospital avoids interference with that building, and is understood to have been for that reason approved by the (then) Local Government Board—as being in all the circumstances the most suitable solution of the traffic problem.”

It further resolved, on the motion of Mr. Lanchester:—

“That copies of this resolution shall be sent by the Royal Institute to the Ministry of Health and the Ministry of Transport, with a request that they will consent to receive a deputation from the Royal Institute and other bodies acting with it in the matter, in order that their views may be put before them.”

We hope that the memorialists will gain their object. There is urgent need for street widening at this point in Croydon, but there seems no reason why it should not be on the other side of the road.

Damage to Property by Adjacent Building Operations.

An unusually interesting and important building case is that which has been decided by Mr. Justice Astbury in the Chancery Division. The plaintiffs, Messrs. Hoare and Co., Ltd., and their tenant, Mr. F. T. Jarvis, the lessee of the Steam Packet Hotel, which is situated on the north side of Lower Thames Street, first sought an injunction to restrain Messrs. McAlpine & Sons, contractors, from driving piles on the site of Adelaide House, the nearest pile being some 40 feet away from the hotel. The evidence given showed that the hotel, though an old building, had been repaired to the satisfaction of the District Surveyor in 1919, and he gave evidence that the building was then in a sound condition. The defects in the house did not appear until the defendants began to drive their piles, but on June 20th, 1921, the City Corporation served a notice on the owners that the building was in a dangerous state, and it was therefore shored up. On January 16th, 1922, a summons was served on the plaintiffs ordering that the house should be pulled down to the level of the first floor, which was done.

The defendants cited in their defence the cases of *Grosvenor Hotel Company v. Hamilton*, *Robinson v. Kelvert*, *Eastern and South African Telegraph Company v. Cape Railway Companies*, and *Kine v. Tolly*. But these, Mr. Justice Astbury said, were mainly cases of nuisance, and *Ryland v. Fletcher* was neither cited nor applied in the present case. In his judgment *Ryland v. Fletcher* applied.

The house was not in 1920 a delicate instrument that should be easily damaged by a justifiable action. It was old, and built in an old fashion but on proper lines, and had been repaired to the satisfaction of the District Surveyor. The plaintiffs, he held, were entitled to damages, the amount of which would be referred to the Senior Official Referee, but the inquiry would be deferred for four weeks while the defendants considered the question of making an appeal.

The case is interesting as slowing the complicated and far-reaching questions of damage which may occur during building operations and may affect a considerable surrounding area, and also calls attention to what the monetary loss by such operations may be in exceptional cases. In this instance, for example, as more than half of the cubic contents of the hotel have been pulled down and the buildings on either side of it have been set back to a new frontage line, the hotel could only be rebuilt to that line and would have a depth of some eight or nine feet alone. In such cases the damage may be held to be twofold; for the building demolished and for the loss of the site area which would automatically ensue on rebuilding. Cases like this illustrate the network of difficulties which surround those who carry out building operations in the heart of the City of London, especially near the river front.

The National Building Guild.

The Secretary of the National Building Guild gives the following account of the work which they have in hand at the present time.

“We have contracts in hand from Dumfermline in the north to Plymouth in the south, amounting to over £2,250,000, and about a million of these contracts are completed or nearly so.

“We have contracts in Scotland for roughly £200,000; on the north-east coast £150,000; the North-west of England, £750,000; London, £600,000; South Wales, £150,000; in addition to work in other places.

“In and about Manchester we are building 200 houses on the Clayton site, 150 at Weaste, 135 at Worsley, 125 at Wigan, and 30 at Altrincham, amongst others. We started the Building Guild three years ago with £280 capital. Since then we have borrowed about £12,000 from our own people, and we have overdrafts at the bank at the present time amounting to something over £80,000. I think anyone who knows the extent of our work would never have undertaken it with less than £200,000 capital.”

We think that he is absolutely correct in stating that few people would attempt to control so large an amount of work without such a capital as he mentions. It seems also clear to us from all we have heard that the Guild has done its work well and we hope it will find no difficulty in obtaining the capital needed. The Trade Unions concerned should surely give every support to a movement which does more credit to labour than the futile and sterile quarrels in connection with which the unions frequently expend great sums of money. We are glad to hear that the Scottish Guild is in a sound financial condition.

Competition News.

The R.I.B.A. Competitions Committee desire to call the attention of Members and Licentiates to the fact that the Conditions of the Douglas (Isle of Man) Laying-out of Building Estate Competition are unsatisfactory. The Competitions Committee are in negotiation with the promoters in the hope of securing an amendment. In the meantime Members and Licentiates are advised to take no part in the competition.

The members of the Society of Architects have been requested not to take part in the above competition without first ascertaining that the conditions have been approved by the Council of the Society.

It appears not to have been generally recognised that, during the eighteenth century, furniture of a very high standard of execution was produced in Ireland, following the main lines of the English styles of the period but with characteristic differences. A group of examples of this class has now been arranged for exhibition in the Loan Court of the Victoria and Albert Museum. Those lent by Mrs. Bruce are of inlaid satinwood, hawood, etc., and consist of a pair of commodes with finely executed decoration in the Adam style, with a pair of tall pedestals and corner-cupboards of similar character. Mrs. Bruce also contributes a pair of small tables and a wine-carrier which correspond more with the style of Sheraton. In addition to the above, Captain W. L. Naper has lent a settee and four chairs of walnut, resembling in general design (though differing in detail), English work of the time of Queen Anne.

London Art Galleries.

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The most important exhibition in London of this autumn—if not of the year—from the point of view of critical interest is that organized and opened this month by Messrs. Agnew's in their Galleries in Old Bond Street of paintings by Old Masters, on behalf of Lord Haig's appeal for ex-Service men. The pictures shown at these Galleries during the months of November and December from the great schools of Italy, Holland and England are, in many cases, of unique value and interest, and paintings which, coming from private collections, have rarely if ever been before the public eye; and it is some consolation in the continuous and deplorable depletion of our national art treasures that we have still so much to show, and I will add, as I judge from the whole attitude of the visitors to these crowded Galleries, a public which can so keenly enjoy them.

I may begin with the delightful study by Van Dyck, which meets us at once as we enter, of two baby heads, those of the children of an ill-fated monarch, one of whom, the Princess Elizabeth, second daughter of Charles I., died a prisoner in Carisbrooke Castle in 1650. Never did the Flemish Master excel the tenderness of these two child portraits: but he is superbly represented in this display, for a little further we come upon a mounted figure, a study of a soldier of the time, which in the painting of the armour and the movement of the charger, is absolutely masterly. The full length portraits of two handsome and richly dressed young men, the Earls of Bedford and Bristol, in black satin and crimson velvet respectively, a signed work, is finely handled somewhat in the grand manner, but less intimate: these splendid youths took different sides in the war of the Revolution—William Russell, Earl of Bedford, being General of Horse of the Parliamentary Army at the battle of Edgehill; while George Digby, Earl of Bristol, fought for the King in the same battle, and was later (in 1657) Secretary to Charles II. On the other hand, the portrait of the Countess of Monmouth, painted about 1634, only interests me as showing how indifferently the brilliant Van Dyck could paint when he was at his worst.

Like his great pupil Sir Peter Paul Rubens is here at his best in his portrait art. That of a man, wearing a ruff and black dress, signed on a letter in his hand P.P.R. is broadly treated, the dress and hands being excellent; and interesting, too, is his landscape scene of "La Charrette Embourbée." The Dutchmen show well here in a superb landscape by Van Goyen (signed and dated 1632) which has that delicious grey tonality which is so characteristic of this master's work in the Rijks Museum and elsewhere; another large landscape is by De Koninck, and two typical scenes of Dutch life are "A Music Party" by Gerard Ter Borch and "The Lute Player," a single figure of a smiling girl, by the master of Delft, Jan Vermeer. But here, even beside the cleverly painted "Portrait of a Man" by Franz Hals, Rembrandt remains unsurpassed. His energetic figure of "An Orator" (signed Rembrandt f. 1644) is good, but entirely delightful is his child's head of the little Titus, son of his beloved wife Saskia. Titus is leaning over his desk with pen and exercise-book in his little hands: but in spite of these accessories he looks in a thoroughly naughty mood, and his expression suggests—as I heard a lady visitor remark—"I won't do my lessons to-day."

I turn last of all to the Italians, who here form a most attractive feature. Bernardino Fungai, a pupil of the Sieneese Benvenuto di Giovanni, was also influenced by Pinturicchio, and we trace something of this in his "Roman Allegory" shown here, with its dainty robed figures of Scipio and other Roman gentleman and its trees outlined against the sky. Matteo di Lorenzo Balducci lived at Castel della Pieve, and came under the attraction of Sodoma: nothing could be more delightful than his nude figures here of Diana and her nymphs standing in a pool to watch Actaeon, as a deer, chased by his dogs. When I find the Virgin and Child next to this placed under Piero di Cosimo I am astonished: there may be good reasons for this attribution, but nothing could be less like the painter of the "Story of Perseus" at Florence or the "Death of Procris" in our

own Gallery, and, yet again, nothing could be more like, in my judgment, the work of Lorenzo da Credi in the Uffizi and Florence Academy than this somewhat fleshy but charming Madonna who gives her breast to the infant Christ. Another Italian portrait which leaves me unconvinced is the "Fattore di San Marco" under Andrea del Sarto, which is certainly unworthy of the painter of the "Madonna delle Arpie" and "Madonna del Sacco." On the other hand, the portrait of Marcantonio Raimondi by Andrea's friend and fellow-worker in the "Scalzo," Franciabigio, is a masterly work. The great engraver, with black velvet cap and black dress, looks at us out of the canvas with a serious and noble expression: behind are the roofs of a walled city—perhaps Rome.

In enjoying these treasures of art we may still hope that the most of them will remain with us; and also that some measures may be devised which will work in that direction. I believe myself that something might be done, not indeed to stop this depletion, but to mitigate its effects.

On Wednesday, November 21, Messrs. P. and D. Colnaghi opened at their Galleries an interesting show of water-colours of H.R.H. the Prince of Wales' Indian tour and of India by Vivian Guy. The two paintings of the State entry of our Prince into Gwalior bring vividly before us the pageantry of the East, and among the studies of India two of Benares, a "Street Scene at Gwalior" and "The Taj Mahal by Moonlight" are especially well handled.

The exhibition of "Pictures Abroad" by H.S.H. Princess Marie Wolkonsky and her son Prince Peter at Gieves Gallery was opened by Countess Torby and the Grand Duke Michael. These oil paintings, which mostly deal with southern Italy and Venice, stand on their own as achievements of personal feeling. It is clear that the Princess must have felt very intensely the spell of southern colour and warmth to create such studies as "Morning at Tragara, Capri," "A still day at Tragara," and "Grand Canal at Chioggia." The red-sailed boats are a flame of living colour, and the technique is free and bold: she is less successful in those more delicate elusive grey effects of which Paolo Sala is such a master. "Southern Italy and Sicily" is also the subject matter of Mr. C. B. Prescott's water colours, opened on November 22, at the Fine Art Society, where the artist gives the charm and colour of southern Italy in his "Palazzo dei Rufoli Garden at Ravello."

Mlle. Zabelle Boyagian, an Armenian painter and illustrator, is the guest of the American Women's Club in Hertford Street, W., with a display of her oil paintings, among which her version of "The Song of Songs" and an attractive portrait of Lady Gollancz and her children are to be noted.

The new election of Academicians includes two Australians and a woman artist. Sir Bertram Mackennal, now a Royal Academician, is too well-known with us to need comment: his "Circe," "Diana," and "The Elements" possess fine modelling and imagination. Mr. Lambert's work is fresh, individual and strong: he was a member of the Modern Society of Portrait Painters, Mrs. Swynnerton, like him now an Associate, the first woman, I believe, to hold that honour since Angelica Kauffman and Mary Moser, revels in sunlight and colour.

Following on the very successful educational tours arranged from "Leplay House," Rome is to be the next centre of study. A party will be taken to Rome during the Christmas vacation, leaving London on Wednesday, December 27 (nineteen days' tour, inclusive). The educational side of the tour is under the direction of Mr. Alexander Farquharson, M.A., who, with the assistance of experts on the spot, will give members of the party an opportunity of following the history of Rome from earliest to modern times. Visits will be made to churches, palaces, and institutions of every kind, with guides who are authorities on the history of each centre. For those wishing to specialise on classical Rome, a series of visits devoted to that alone is being organised. A further group to study Rome of to-day, with special reference to its educational, social and political institutions, is being arranged for. A course of lectures on the general history of Rome in relation to Italy and the world will be given during the tour. For full particulars application should be made to Miss Margaret Tatton, director, Leplay House Educational Tours, 65, Belgrave Road, Westminster, S.W.1.

Art and the Law.

The present prices to be obtained for old furniture are a stimulant to this market. The sale at Messrs. Christie Manson and Woods' on Thursday, November 25, the first of their season, and a "record" as an initial sale for prices obtained, may serve as an example. Of course in this case there was a very attractive set of pieces, and the same might be said of the "provenance"; for I believe it is no secret that these pieces, described as "the property of a lady a legatee under a will," were from the collection of the late Miss Alice de Rothschild, and were of exceptional merit.

Especially beautiful in design and craftsmanship were the Louis XVI. marqueterie commodes, of semi-circular shape, mounted with an ormolu frieze, of one of which I here give an illustration: coloured woods were here inlaid upon satinwood, and this piece was stamped G. TOPINO ME. Bidding for this beautiful pair started at 1,000 guineas, and they fell to Messrs. H. and J. Simon for no less than 3,750 guineas.

The same buyers acquired for 195 guineas the no less attractive Louis XV. commode, also semi-circular and mounted with an ormolu frieze of rosette and riband, the centre panels filled with a delightful painting in grisaille of sporting Amorini and infant Bacchanals on a green ground. These were perhaps the two choicest pieces, but the furniture right through was of very high quality, and fetched a total of £20,398 7s. for 164 lots, M. Founés, of the Rue St. Honoré, Paris, being a large buyer. The terra-cotta "Bacchante," a signed work by C. J. Marin, dating from that year of revolution 1795, is a perfect little gem.

I strongly suspect that a fair number of these fine pieces will find their way from Paris or London across the Atlantic; and I mention this sale as showing what a demand for the best work there is at present. Consequently there is without doubt a good deal of furniture made up for this demand. My friend Sig. Riccardo Nobili, in his admirable work on "The Gentle Art of Faking," published this year, observes that "the inexperienced and unwary collector is in most cases the innocent originator of fraud; if there were no buyer there would be no seller"; and on this question, without expressing any opinion in the matter at issue, it may be interesting to study a recent case before the Courts.

A case of very considerable public interest, especially to collectors and dealers, was tried recently, in the King's Bench Division before the Lord Chief Justice and a Special Jury. This was the action for damages for fraudulent representation brought by Mr. Adolphe Shrager against Messrs. Basil Dighton and Basil Lewis Dighton, of Saville Row, W., who carry on the business of dealers in antique furniture. The plaintiff alleged that he had been induced to spend £100,000 on furnishing his house on the strength of false representations that the furniture, pictures, etc., supplied to him were genuine antiques and "collector pieces." He claimed a declaration that he was not liable to pay for the

hundred pieces were supplied through Basil Dighton, Ltd. He bought to the amount of £87,000 and paid £30,000 in cash: at the end of 1921 he was asked for the balance, and then obtained skilled advice, which resulted in the present action. He himself in evidence stated that he wanted to obtain money to meet Messrs. Dightons' demand, and when the pieces were selected for auction he was told things that gave him the shock of his life.

The plaintiff stated that he had paid £250 for a grandfather clock, which Mr. Lawrence told him was "a jolly good clock," £240 for a sideboard, £1,850 for a French writing desk, which Mr. Lawrence said was a magnificent specimen of Louis Quinze worthy of a museum, £1,150 for fifteen Chippendale chairs, and £1,650 for "a very fine satinwood commode." The expert



LOUIS XV. COMMODE. From Christie's Sale November 23, 1922.

evidence on many of these articles was very unfavourable. A mahogany table which cost plaintiff £260 was not antique, but an article of commerce sold in quantities by manufacturers of bogus antiques. The pair of lamp stands sold as Chippendale had new legs and a stem from a child's four-post bed. The price of £450 was ridiculous: as secondhand furniture they might be worth £8 10s. The "eighteenth century blue lac cabinet," for which plaintiff had paid £850, was one of the stock lines of makers of bogus furniture. The "Charles II. walnut table" had no period at all: every bit was made up. Instead of £375, said the expert, it might be bought for £10. The Chippendale mahogany side tables had modern carvings: sold for £1,100, their value to make would be about £7 each.

At this point in the evidence his Lordship said the case had reached a stage when it was desirable to make a ruling. The plaintiff put his case in two ways. First he asked that the transaction should be treated as one, in which case the question to be decided was whether plaintiff had been deceived from the first. The second was to treat each specific purchase as separate. This could not be put to the jury as a simple question, and in the circumstances, without in the least prejudging the questions in any way, except that the case could not be regarded as one whole, he should order the matter to be referred to a referee under the statute.

The jury were then discharged, and his Lordship said the question of costs could be settled by the referee. The hearing, which occupied four days, ended on Friday, November 17.

It would be interesting to obtain the opinion of a number of acknowledged connoisseurs as to what is or is not a genuine antique. We imagine no one would say that because an old piece of furniture had been repaired by the addition of some small item, such as a beading round the edge, that the piece was a "fake." Would the addition of a new leg to match the three original ones render the whole a fake or not? Is it or is it not a question of degree, of the proportion which the added work bears to the whole, or must we insist that every part of a genuine piece of furniture should be original? These questions would not arise if collectors were more concerned about the intrinsic merit of what they bought and less of the somewhat less relevant issue of mere age.

The Surveyors' Institution announce that the Joint Committee representative of the profession and contractors, which has for some years been engaged in preparing a comprehensive manual laying down standard methods of measurement for builders' work, have now completed their labours, the object of which has been to secure greater uniformity throughout the profession in all parts of the country in the preparation of bills of quantities. The handbook, which is now in the hands of the printers for final revision, will shortly be ready for publication.



LOUIS XVI. MARQUETERIE COMMODE. From Christie's Sale of November 23.

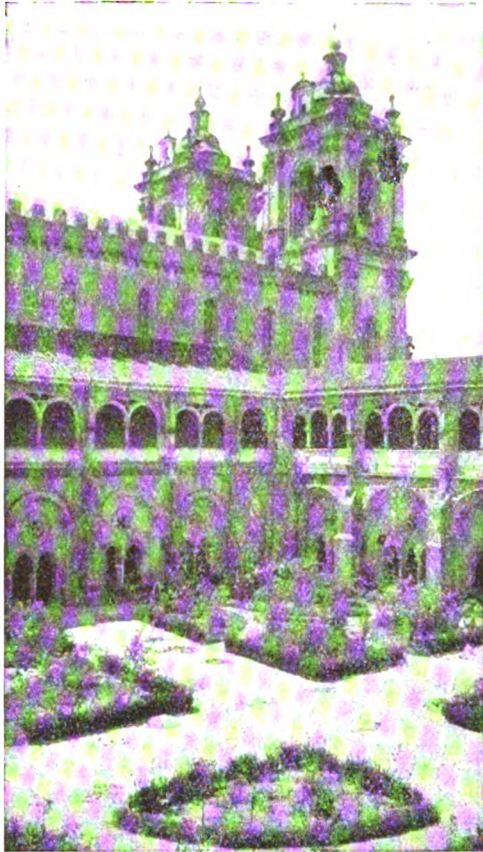
articles, and asked damages for fraudulent representation, and alternatively damages for breach of warranty, and alternatively £85,264, as money paid on considerations which had failed. The defendants denied these allegations, and counter-claimed for £25,000 the balance of their account.

The case was tried at length, occupying the Court for four days. The plaintiff's case was in charge of Mr. Disturnal, K.C., and Mr. J. A. Bell; and for the defendants Sir Ernest Pollock, K.C., appeared with other counsel. In opening the case Mr. Disturnal pointed out that in November, 1919, the plaintiff formed the idea that he would like to have his own house, and fit it up on an expensive scale. He consulted his friend Mr. Lawrence, who took charge of the matter, and between four hundred to five

Notes from Portugal

By G. A. T. MIDDLETON.

No. VII.—Alcobaça.



WESTERN TOWERS AND THE CLOISTERS, ALCOBAÇA.

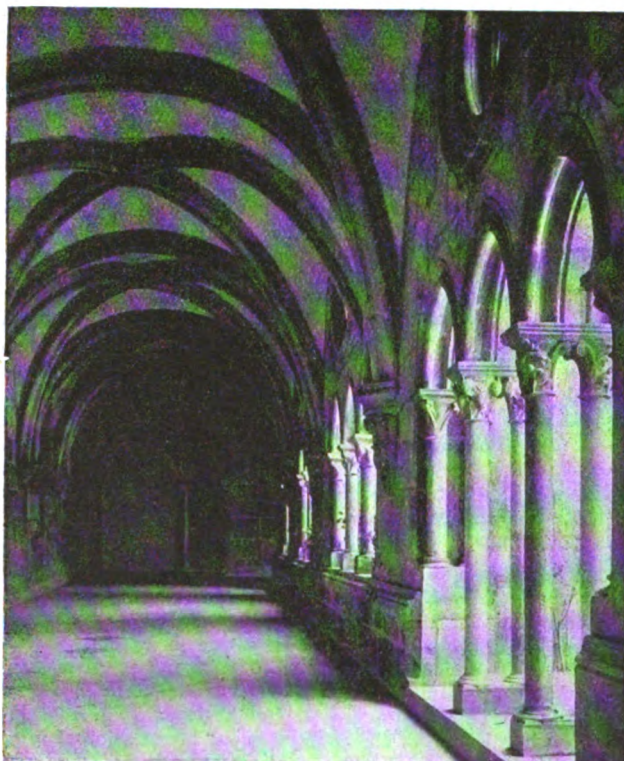
The great monastery at Alcobaça is one about which it is somewhat difficult to write; for though amongst the Portuguese it is esteemed, its "greatness" is in size mainly—not of the church, but of the comparatively recent surrounding buildings, added in an atrociously bad phase of Renaissance architecture at a time when the place had

acquired its later reputation as the most distinguished temple of gluttony in Europe! Still, there are traces, at least, of something more consistent with the severe rules of the Cistercian Order, enough perhaps to indicate the changes which the building has undergone from time to time, and the extent of its present degradation.

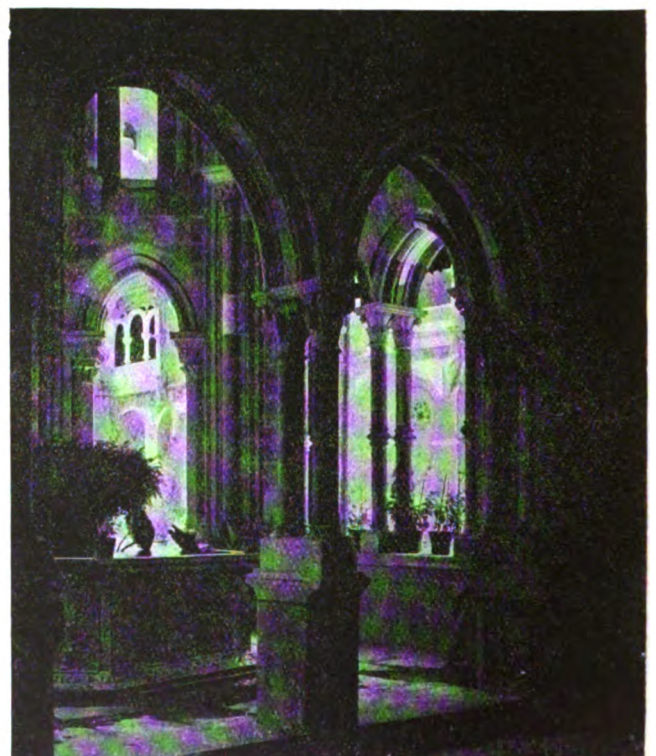
How great this is may be somewhat gauged, though not fully grasped, from the accompanying photograph of the western towers, taken from the only position from which they do not appear absolutely hideous; for, from the cloister, the general massing is that of the original Romanesque structure, now covered with plaster "orders," unduly heavy and ornate, and terminated by an uncouth quasi-Indian roof with false dormers. As to the remainder of the front, and the long barrack-like wings on either side (now actually used as barracks), the less said the better—though the pseudo-Gothic upper cloisters are almost equally bad.

The lower cloisters, however, retain much of their original character, and are by no means dissimilar from those at Lisbon Cathedral, the enclosing arch of each bay being neglected, as an addition. There is the same large traceried eye over paired or triple pointed arches, which are carried on coupled shafts—an arrangement which possesses both dignity and beauty, equally without and within. The mouldings, square abaci and carving all indicate French origin, or a French trained restorer: which, it is difficult to say, for little of the actual original work is to be seen, unless it be in the ribs of the cloister vaulting. This is semicircular and quadripartite, the diagonals being depressed, and the filling plastered, and may well be the oldest work now remaining.

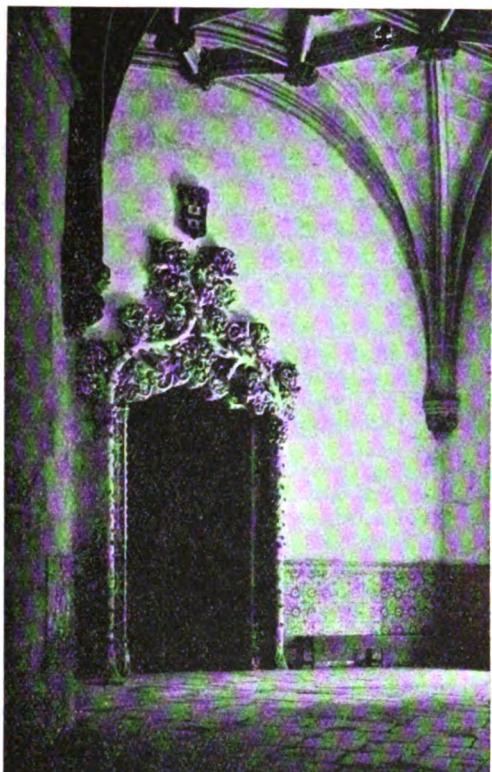
As frequently happens in Portugal, the most beautiful feature of the cloister is the chamber built out from it to contain a drinking fountain. At Batalha the chamber is ornate and the fountain simple though exquisitely designed: here the chamber is comparatively simple, in conformity with the Gothic cloister, while the fountain has all the appearance of a richly carved Renaissance altar tomb, of Italian character and the best period. There is none of the coarseness here which so disfigures the west front, but all the perfection which one would look for in a



EAST WALK OF THE CLOISTER.



FOUNTAIN IN NORTH WALK OF CLOISTER.

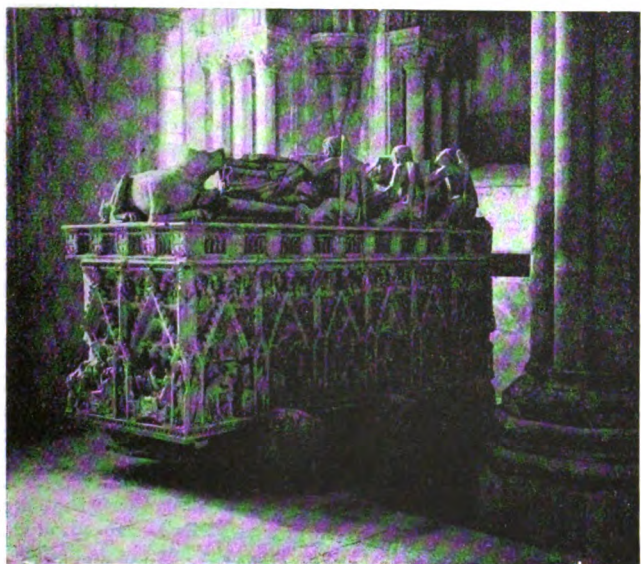


DOOR TO SACRISTY.

cherished exhibit at South Kensington, with ornament in the right places and never to excess, and applied to a simple and well-proportioned outline.

Two tombs in the sepulchral chapel carry out the same idea of rich detail in a comparatively severe setting, but the detail is richer and the setting more severe. These are the tombs of D. Pedro the Just and his queen Ignez, and they are amongst the most elaborate early fourteenth century monuments in the country. That of D. Pedro, which is illustrated, rests upon the backs of six sculptured lions, and its main body is covered with sculptured scenes in miniature from the life of our Lord, set in sixteen canopied panels—six along each side, and two at each end. Tracery and diaper work, all of extreme delicacy, fill up the space beside the crocketed canopies, while the table top is edged with heraldic shields alternating with tracery, and surmounted by a recumbent effigy, with a hound at the feet and three supporting angel figures on either side. It is very beautiful.

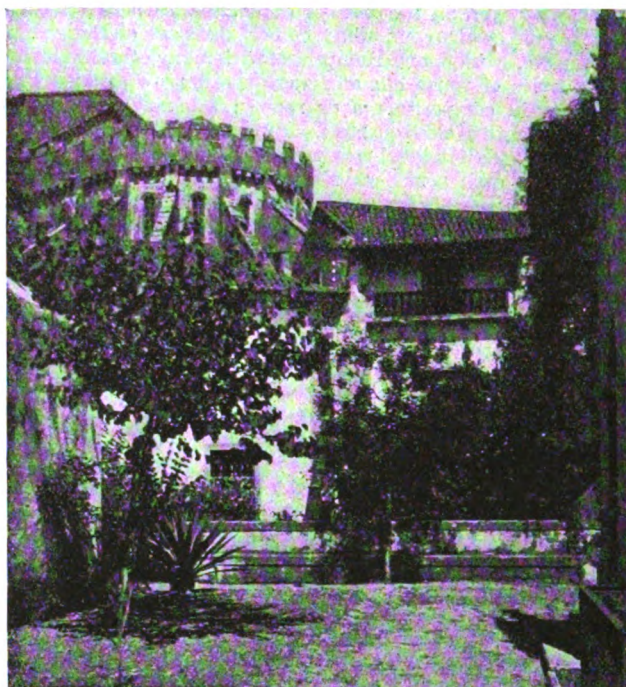
There is only one example of the Manoëlian Gothic of the early sixteenth century at Alcobaça; this is the doorway to



TOMB OF D. PEDRO.

the sacristy, set in a vaulted chamber of the same date, having a Mooresque tile dado of geometric pattern. The doorway is, if possible, more florid than usual, even at that date, and forms an exaggerated example of autumnal foliage run riot. A tall stem rises from the ground on either side from exposed roots and showing the knots whence leaves have fallen. Over the doorway these stems are twisted to the outline of an arch of double curvature, out of which protrude great leaves as degenerated cusps, crockets and finials, with quite undue exuberance, yet exhibiting craftsmanship of high order.

There is another doorway close to it, leading to a vestry, of an entirely different character—that of the Genoa district of Italy of 1650, or thereabouts—an obvious later inset into an earlier wall, as the pieced-up bonding indicates. In its proportions and its details also it is worthy of some study, notably in the treatment of the architrave surround, arranged as a continuous panel, and of the frieze with the same projection, enclosed by a fillet (which is that of the architrave continued) and enriched with flat foliage in the same plane as this fillet.



APSE TO THE MONASTERY CHURCH.

The over-decorated sacristy contains two cabinets of much the same date as this door—one of them bears the date of 1664—of finely chosen woods, inlaid in geometric patterns and lozenges. Were they of English workmanship one would be inclined to class them as Jacobean, but in fact we have little that is contemporary with which to compare them. They are fine pieces of furniture, but possibly over-decorated.

Before closing this notice of a church which is little visited by Englishmen, it may be worth while to draw attention to the many sided apse, as seen from the old cemetery, with its simple narrow windows, its strong corbel table and embattled parapet, and its radiating flying buttresses; and one wonders whether it would have looked better than it does now with its original high-pitched roof.

Applications are invited for the post of Director of the School of Architecture, at the Birmingham Central School of Arts and Crafts, vacant on January 8, 1923, by the retirement of Mr. W. H. Bidlake, M.A., F.R.I.B.A. The commencing salary, which will be between £400 and £600 per annum, will be determined by the selected candidate's qualifications, experience, and time to be given by him. Canvassing, direct or indirect, will disqualify. Application forms and further particulars may be obtained from the Secretary, Central School of Arts and Crafts, Margaret Street, and forms must be returned to him by December 6.

Architectural Association.

An ordinary general meeting of the A.A. was held on Monday, the 27th inst., at 34-36 Bedford Square, W.C., Mr. Stanley Hamp, president, in the chair.

Mr. L. Sylvester Sullivan, vice-president, in formally presenting the audited accounts for the session 1921-1922, said that the Association was last year on the right side and had paid off £500 debentures.

Miss Edith Place then gave an address on "A Woman's View of Domestic Architecture." In her opening remarks Miss Place said she experienced considerable diffidence not unmixed with alarm on being asked to speak before such a special audience. In consequence she would pin herself entirely to the word "domestic." One found that "building" is governed by convenience and utility, and uses its materials accordingly; whereas architecture is the art of so arranging and planning the materials, enrichments, etc., as to give to the building beauty, unity, grandeur and power. Vitruvius spoke only of stability, utility and beauty—those attributes are all needed in domestic or home architecture. The others came later. No doubt the early home builders thought more of utility than of any other quality. They used the materials found at hand, and their dwellings were roughly suited to the varied climates and surroundings. This way of using local material had continued to this day even in the making of boundaries between fields, as one could see by comparing the field divisions of Derbyshire, Devonshire, Norfolk and Hampshire, with many other examples. The peoples of warm climates were the first to arrange their dwellings in compartments or rooms; the northern peoples, finding warmth in close quarters. By slow advance, the standard of comfort and individual requirements finally led to the present feeling that each person should have a private sleeping-place. Attempts to beautify or render more comfortable produced the modern carpet and wallpaper. By degrees we come to the house of to-day—though people in London are mostly the victims of houses of yesterday, built without any idea of the difficulties which would beset the present generation in home-keeping. How little thought there was for the domestic worker all through the last century, and how many willing workers there must have been who took their discomforts as unavoidable or part of their "state of life"! This has much to do with the scarcity of domestic workers to-day. At every housing or domestic exhibition the palm of place and interest goes to so-called "labour-saving devices," generally symbolised in England by a Bissell sweeper and an "O'cedar" mop.

If they took the words of old Vitruvius, stability, utility and beauty, they must apply much thought to making domestic architecture a real thing dealing with every detail of the home, especially those important home duties of cooking and cleaning. There was no doubt whatever that it was really difficult to tackle this in a practical manner. The English were as a people very conservative, much devoted to "things." The dirty atmosphere of towns made special troubles; also, as a coal-producing country, we clung to our fuel, which, alas! carried with its undoubted charm also many drawbacks, both as to labour, cleanliness and even heating. Our "reason," aided by our fogs, urge another fuel; but our hearts and imaginations plead for our own coal.

Among the very first labour-saving points Miss Place put greater thoroughness of construction; well-fitting doors and windows; boards which do not allow the dust of the space between to filter up, and which being of good wood (teak for preference), truly laid, should need no covering; wainscoting which meets the floor firmly, and preferably with a curve; the same with doors. Even the houses we have would be cleaner and warmer if these matters were properly attended to, and it would be an economy in the end. Lighting was an important thing both by day and night, and had to do with easy cleaning. Electricity and gas should be made far more serviceable than at present. Water and the escape of waste should be simplified. In that connection lay an important point in labour-saving: washing basins and sinks should all have hot and cold supplies and their own escape. Speaking-tubes save unnecessary runs from room to room. More lavatory fittings would be useful, and the housemaids' convenience, which are often only sinks, should have proper wastes trapped for emptying slops.

Then as to cupboards. These were rarely deep enough for clothes to be kept in the right way, but always produced a muddle. Then the woodwork should go up to the ceiling instead of leaving a space to catch dust and being too low to hold anything usefully on a top shelf. In some of the older houses in the country there were noble cupboards, fitted with all kinds of useful contrivances. If a cupboard was large enough to stand in, it should have a fitting for light if there were no window space.

The kitchen has been dealt with so frequently that one feared

to be tedious. But there were some points worth making. Kitchens, which should be the cleanest room in a house, were sometimes the darkest. Let there be a good light, both by day and night (of course, not underground); a deep sink easily cleaned and with a plug, and ample space on each side. The cooker should not stand in a draught, and should have good table space by it. A table in the middle of a room was rather a nuisance. The dresser should be deeper and have glass doors to keep out dust. The drawers were, as a rule, too deep to be kept tidy, and more shallow drawers would mean each thing in its own place. They should be fitted for all the small utensils, like patty pans, bun tins, etc., and of course, knives and forks. The table or shelf near the cooker might have arrangements for the needs of cooking, such as a place for salt, pepper, flour, fat, etc. Where there was no scullery there should be a saucepan stand easy to get at and with doors panelled with perforated zinc to give air. It would not be a bad plan to get half the store cupboard panelled in the same way. A big kitchen was not required.

There was too much movable furniture and ornaments in our houses, especially in bedrooms. If there were more fittings in the shape of cupboards—some for hanging, some with drawers and small cupboards, fitted basins, etc.—we could do away with wardrobes, chests, washstands, and sometimes dressing-tables. The cupboard door could have a long mirror panel. This would leave the bed, some chairs and a table as all the fittings needed.

Even sitting-rooms could be better and just as pretty and comfortable with cupboard fittings: shelves with glass lids, a writing bureau beneath; a recess cabinet with glass doors for ornaments, perhaps the cupboard below could have in one half a coal cabinet; the other for music. Fittings which were partly shelves and partly cupboards were both useful and attractive.

Much can be done now in treating walls so that they can be kept clean, and with "power" electricity laid on various mechanical devices can be used quickly.

For the country, Miss Place favoured painted walls; windows which could be dropped into the wall, for the bedrooms very deep inside window-sills which can serve as dressing-tables; all cupboards and chests fitted, also the washstands. Service is scarce in the country and should be made attractive.

In California, where there are no servants, and where most people would not know what to do with them, many serviceable apartments have been built for the use of the professional women who have to do their own work and carry on their professions and businesses. Not only does one cook and clean, but most women do their own washing. All these places are constructed with conveniences for the purpose. The average home there is built of wood, beautifully floored and very carefully planned. There is generally a roofed porch and what is called a sleeping porch, which has a roof, but the walls are of metal gauze—though they believe in sleeping in the open air, they have a horror of flies and insects. The cooker is usually gas, and well raised above the floor so as to be accessible. The light, electric. There are washing-tubs with plugs. All the cupboards are closed with glass or wood doors. As a rule there is no "up-stairs" or only one upper floor at the most. Of course, central heating saves much trouble. The lavish use of electricity is another marked feature in America.

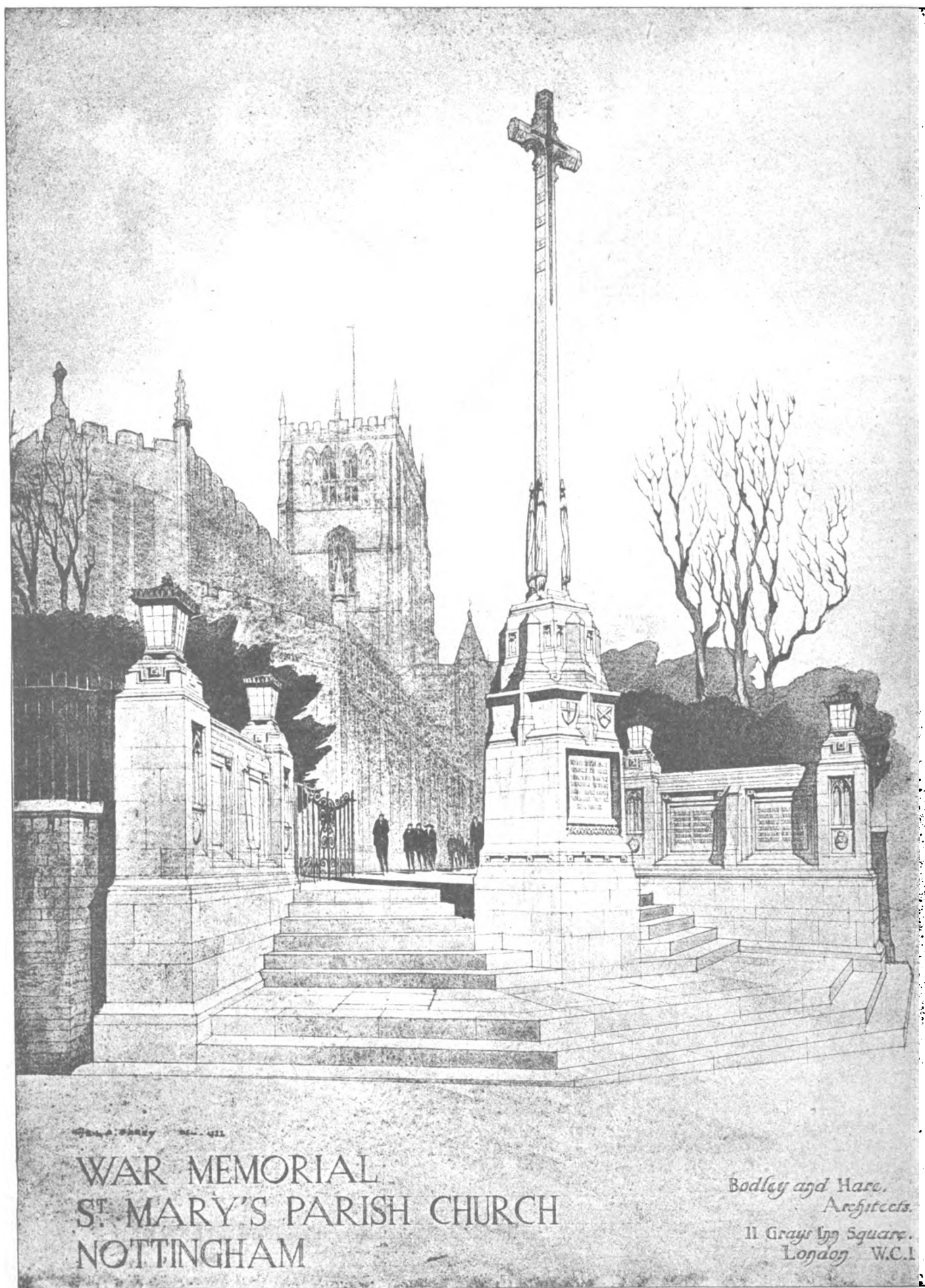
London is full of houses which are too big for the families of to-day. The best thing was to make them into maisonnettes, which are really more "homey" than flats, and have loftier rooms. Blocks of flats seemed dismal things.

Of course, people in this country were rather restricted by their own slowness. There must be "dining-rooms" and drawing-rooms, even if each is little more than six feet square; a roomy parlour would not be thought suitable. In the ordinary flat there is no space for boxes or storage of any kind, whereas in converted houses some provision can be made.

In new houses the kitchen should never be put on the south side, even if it has to be in front. The kitchen window can be made as attractive as a dining-room window, also it relieves the tedium of the domestics to have an amusing outlook. The dining-room should be next to the kitchen, with a door or hatch between. In a double-fronted house the drawing-room could run right through the house. A point should be made of speaking-tubes. No one liked to be at the end of a bell-pull.

Windows should always be low enough to admit of anyone being able to see through them from a chair; this makes an extraordinary difference, both to the beauty and comfort of a room—it was a mistake to have windows which can only show one-third of the whole space open. There should never be casement windows on the topmost floors, as is often the case, for these cannot be kept open in rain and wind. Indeed, unless the windows sink into the wall or slide, the homely guillotine is the best.

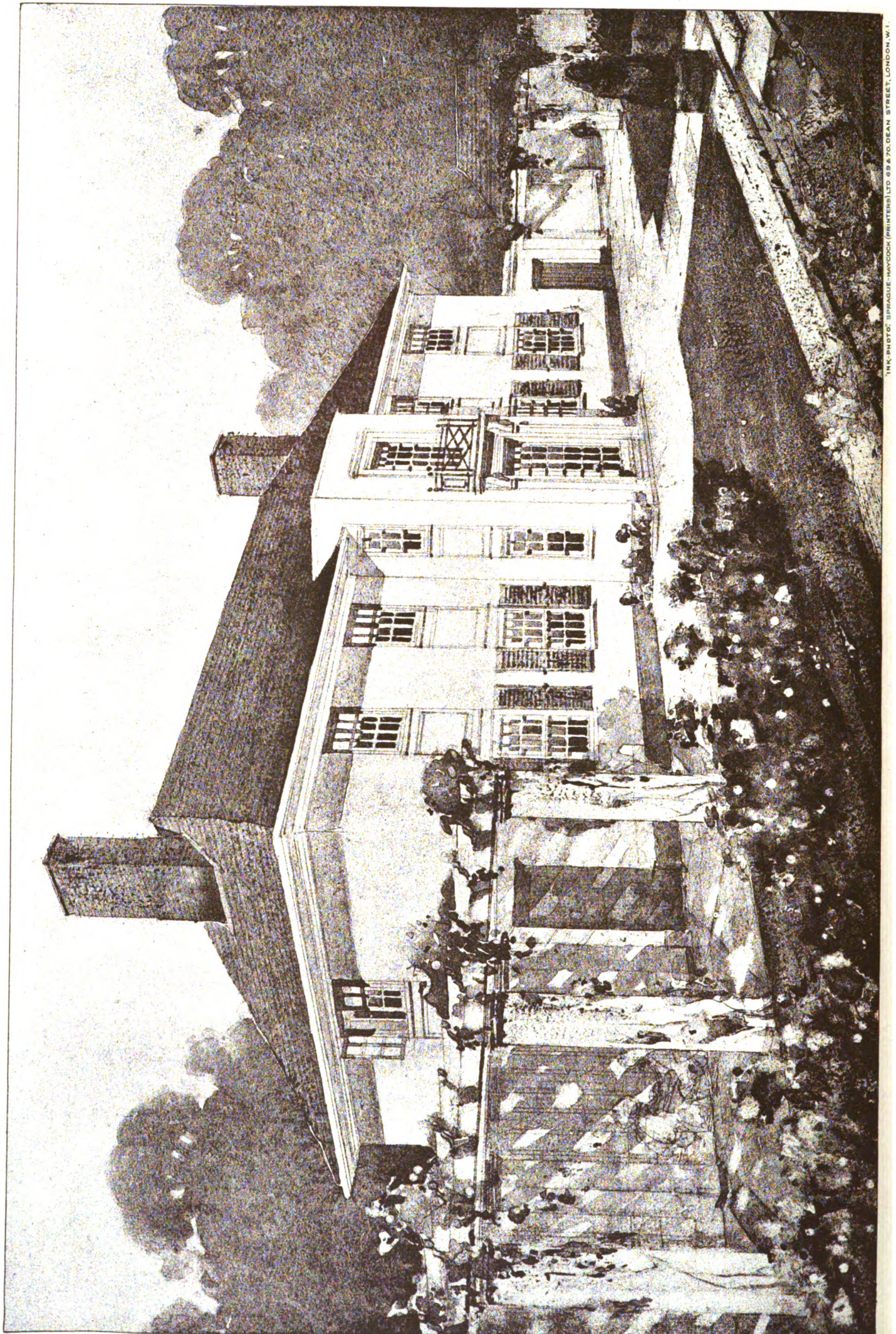
Stairs are a great worry. But in some of the old houses in Whitechapel they are so pitched as to cause very little fatigue.



WAR MEMORIAL
ST. MARY'S PARISH CHURCH
NOTTINGHAM

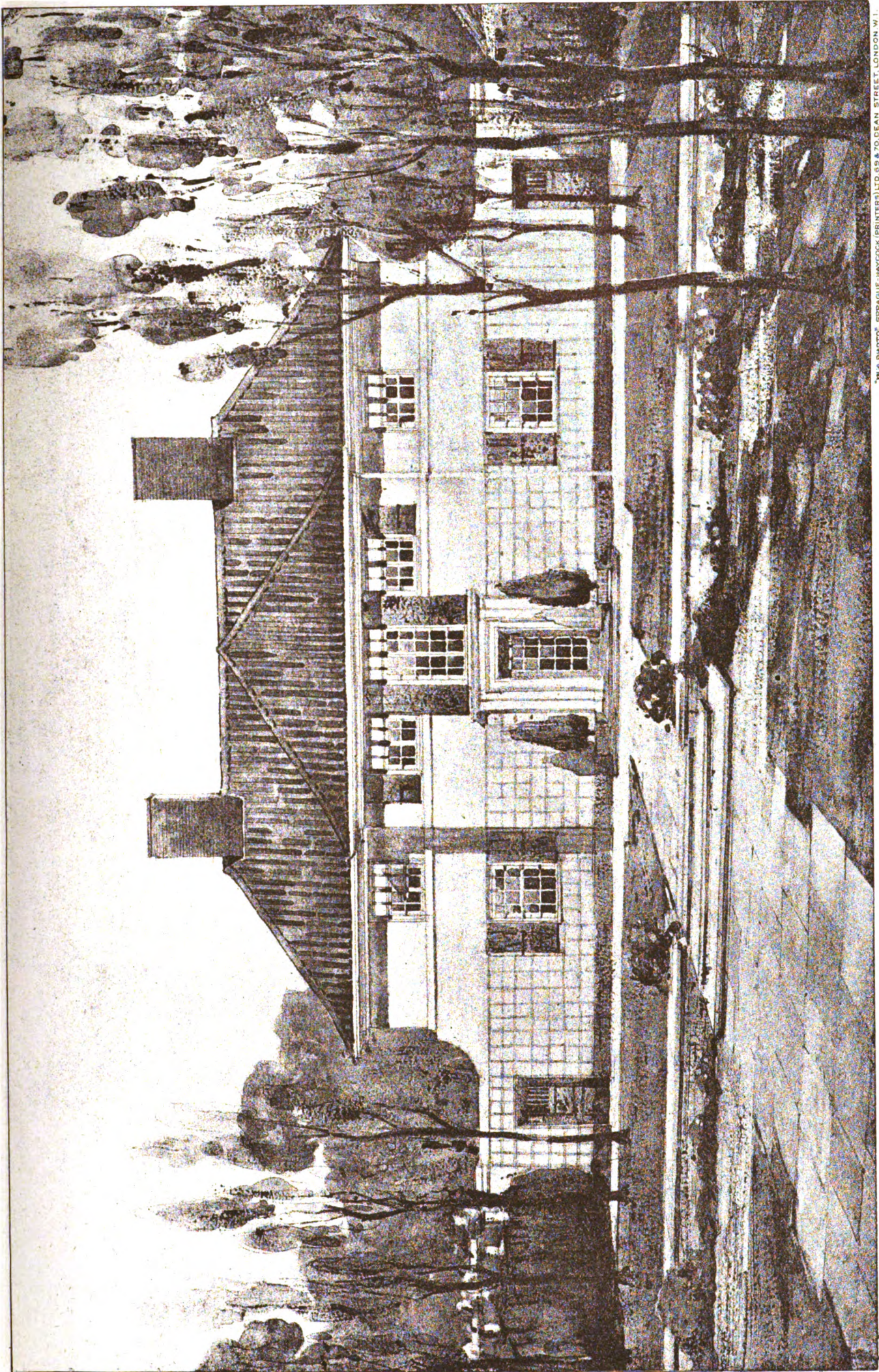
*Bodley and Hare,
Architects.
11 Grays Inn Square,
London W.C.1*

INK PHOTO "ST. MARY'S" HAYCOCK & SONS LTD 100 & 101 DEAN STREET LONDON W.1



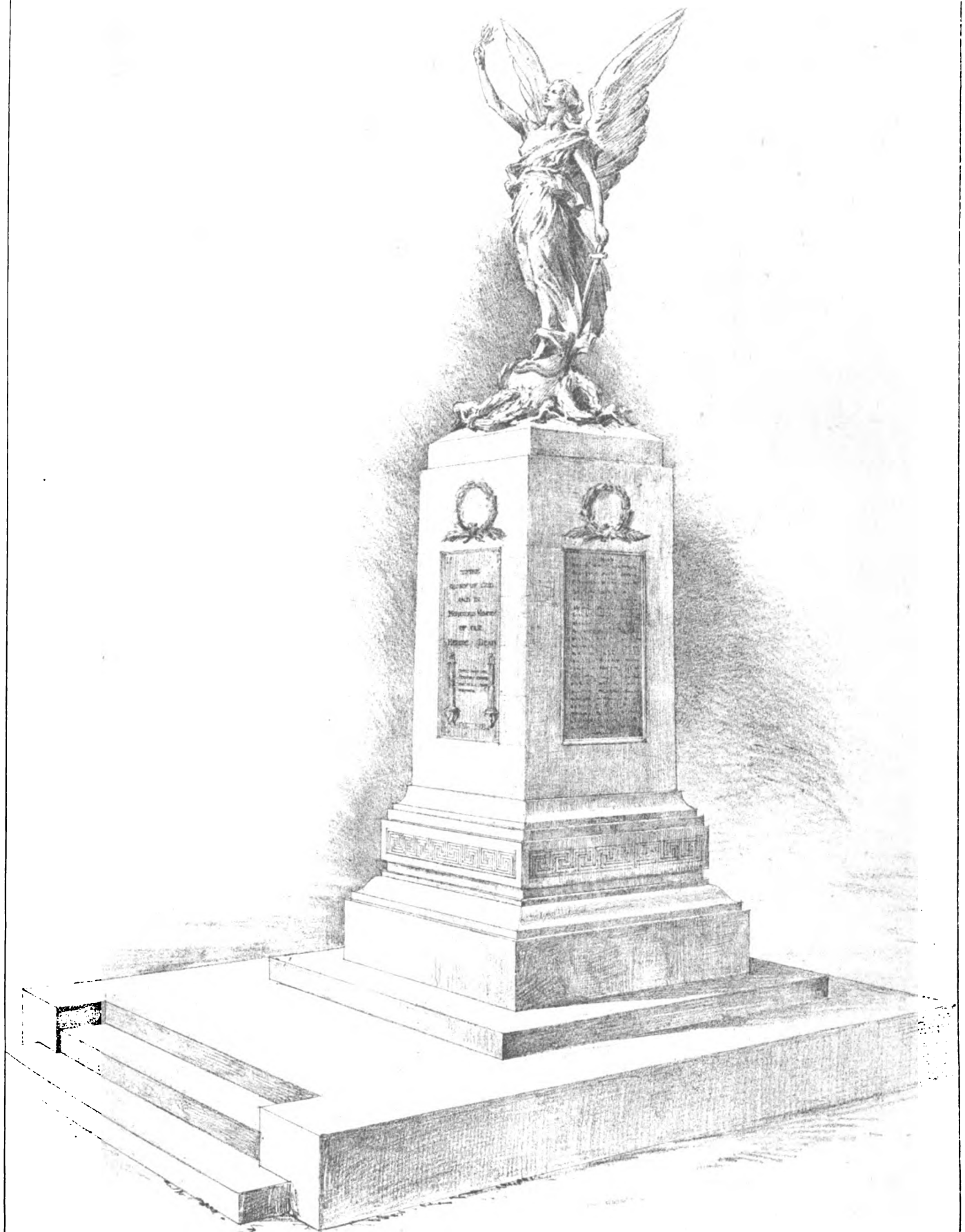
HOUSE AT NORTHAMPTON.
P. D. HEPWORTH, ARCHTCT.

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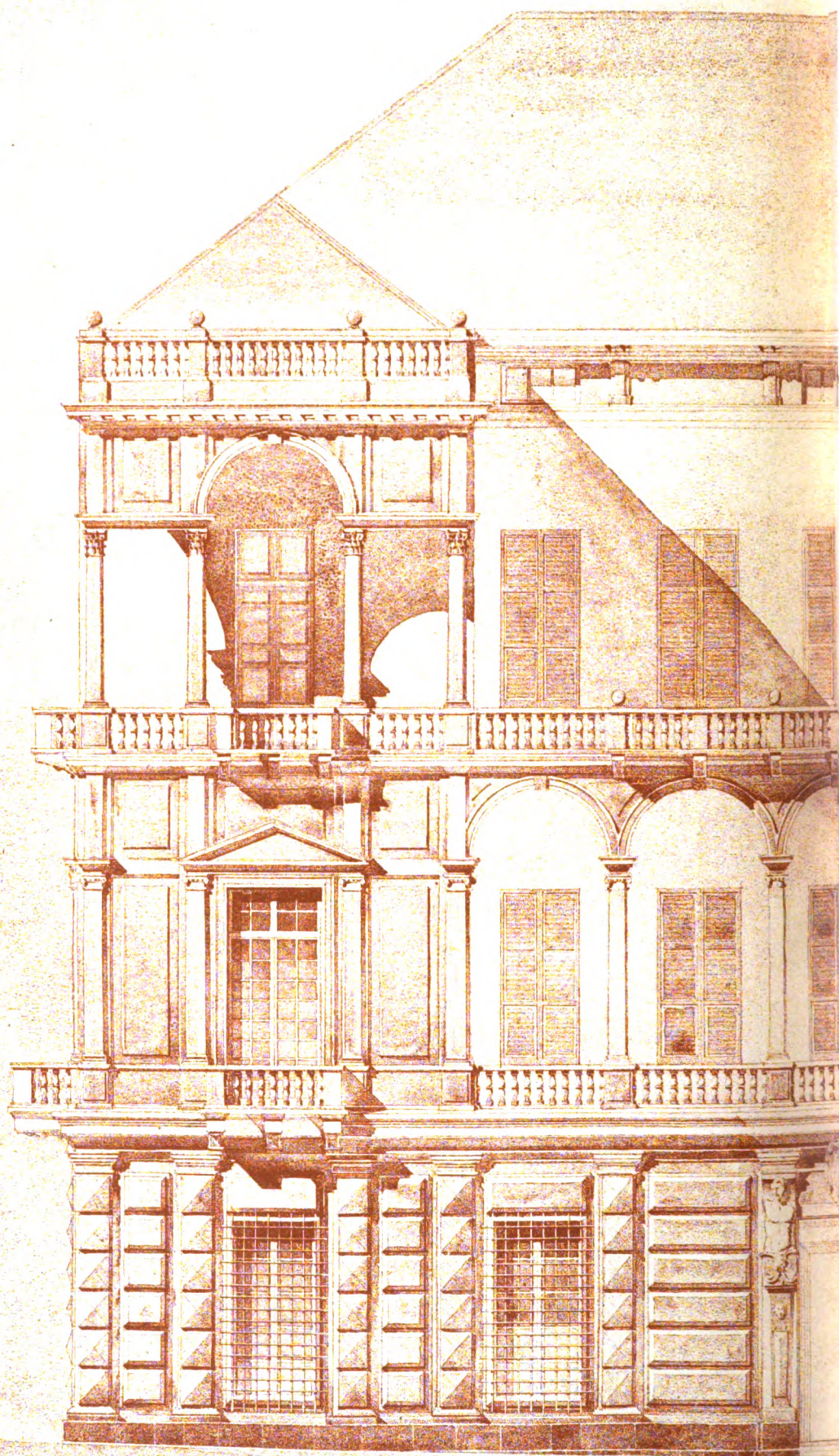
"N.Y. PHOTO" SPRAGUE-HAYCOCK (PRINTERS) LTD. 69 & 70, DEAN STREET, LONDON, W.1.

HOUSE NEAR HATFIELD.
P. D. HEPWORTH, ARCHITECT.



PERSPECTIVE VIEW FROM SOUTH EAST

"INK PHOTO" SPRAGUE HAYCOCK (PRINTERS) LTD 69 & 70 DEAN STREET, LONDON, W.1



PALAZZO LERCARO
QUARTER INCH SCALE



PARODI GENOA

Narrow, steep stairs are hateful. Front doors might easily be recessed to save standing in the rain and wind. This would not interfere with the front line, but only take about two and a half feet from the passage or hall. A small cave over the door would be attractive.

DISCUSSION.

Mrs. Charles Peel, in proposing the vote of thanks, remarked that every man at one time or another kept a servant, whether she was called his wife, his housekeeper or his maid. The average idea of a labour-saving house was one provided with a vacuum-cleaner and an "O'cedar" mop. It was still to be realised that they could never get a labour-saving house unless it was properly planned from the first. There must be both the right material and the right planning. In England the subject had only been played with. It was as necessary to study the best way to achieve a labour-saving house as it was to achieve the best labour-saving factory. In a small investigation of her own, Mrs. Peel found that in a certain house with a kitchen and a scullery the cook had to walk 350 feet while preparing high tea for a family. By reorganisation that distance had been reduced to 34 feet. Another investigation showed that in a basement house for a middle-class family a load of no less than 1½ tons in weight was carried up from downstairs in a week. There was no arrangement so labour-saving as to have the dining-room and kitchen back-to-back and a connecting buttery. Young architect students should have an additional course in their training, viz.: a six-months' apprenticeship to a charwoman. "When you have gone through that course you will know what it is to clean a bath, doubled up like a croquet hoop with your head in the bath, and to deal with a bath fixed so close against the wall that you cannot clean behind it. You will thoroughly understand the art of labour-making, and then you will know how to do something about labour-saving."

Mr. T. Laurence Dale said that the woman's view of domestic architecture was, of course, the most important one. If a man was left to himself he would scarcely trouble about the house. Virile and sanguine races lived in wigwams. It seemed to him that Mrs. Peel had been a little hard on architects. We were living in difficult times and in out-of-date houses, which should be scrapped. Miss Place had spoken much about fitted cupboards—he believed they were the practice in America where the distance between towns was so vast that the transport of furniture became a serious item. But it would be difficult to get English people to adopt the method. The furniture we possess is either our own selection (and, therefore, dear to us) or something in the nature of an heirloom. His own experience was that ladies were most conservative and regarded any suggestion of a revolutionary nature as the outcome of ignorance. The essence of planning domestic offices was to have pleasant places for the servant to live in and useful places to work in. If a big kitchen was provided, the maids generally preferred to use it to sit in rather than their own sitting-room. It was better to have only a small kitchen. It was interesting to find that a woman's view of architecture had nothing whatever to do with architects. Miss Place would quite obviously be an ideal client. The ordinary client might accept suggestions on the lines of those put forward, but when the estimates were received there was a considerable risk of the whole thing falling through. Unfortunately houses were always looked upon as investments. Miss Place's remarks would be better addressed to clients and all people who might think of building.

Mr. H. B. Creswell remarked that he was weary of the subject of cupboards. It was not architecture. If a man's life was given up to all the petty details it would not be worth living. Those things will never be settled. Much had been said about servants. Servants now felt no respect for their calling, and had become a perfect curse. Miss Place had said no word as to the cost of her cupboards. In them would be stored countless cardboard boxes, about whose contents no one was certain—as to whether they held broken croquet mallets, ruptured hot-water bottles or discarded finger-stalls. A woman knew that if only there were enough cupboards she need throw nothing away. It was all a form of indolence, a shirking of the necessity to make up one's mind. Statistics as to the distance walked by a servant or the weight carried upstairs might be made to prove anything. He himself had calculated that he was sixteen whole days every year over shaving!

Mr. James Tate pointed out that the question turned on the attitude of the client to the extra cost involved. Most of the evils mentioned by Miss Place resulted from employing not an architect, but a designer like Mr. Heath Robinson.

Mr. Jenkins said he had worked out the expense of embodying Miss Place's suggestions in a house of seven bedrooms and costing, say, £3,000. The additional expense would be £2,000.

Mr. H. Chalton Bradshaw having also spoken, the vote of thanks was put by the chairman and carried with applause.

Brief replies were made by Miss Place and Mrs. Peel.

Birmingham University Town Planning Lectures.

Continuing his course of lectures at the above University, Mr. William Haywood dealt with Paris.

During the eighteenth century Paris surpassed Rome in Town Planning progress, but, said the lecturer, the singularly complete plan to which she has now attained is largely the result of a wonderful series of unpremeditated sectional developments, adroitly linked together by Haussmann in the nineteenth century.

Thus on the north bank of the Seine during the reign of Louis XIV. the spacious bastions of the city walls were replaced by a great sweep of tree-lined avenues, afterwards known as the "Grande Boulevards"; the Tariff walls built in 1784, with their extra-mural avenues, become the "Boulevards Extérieurs"; the Champs Elysées, an exclusively Royal parkway from the Tuilleries to St. Germain, was converted to public use by Napoleon I.; and the destruction of the Tuilleries led to the opening up of an unique approach to the Louvre, upon which, with the Place de la Concord as pivot, the Madeleine and the new façade of the old Palais Bourbon (now the Chambres des Députés), give a balanced architectural composition.

The task of linking up these and other disconnected units of the city plan was given by Napoleon III. to Haussmann, who displayed consummate ability in dealing with the many legal, technical and financial problems involved. He continued the Rue de Rivoli from the Louvre to the Bastille, re-establishing the great cross road from east to west, and by innumerable cuttings, junctions and linking-up devices brought the road system of the city into coherence.

The inspiration for the new sense of unity in Town Planning, now apparent in the plan of Paris, is to be found primarily in the formal and orderly thought of the Renaissance, and this new factor in design was first exercised with freedom, in the landscape architecture of the period. It was in the academic completeness of such gardens as those of Versailles, Marly and Hampton Court that the corporate possibilities of Town Planning was most easily seen, and although it cannot be said that the lesson was fully applied within the period of the Renaissance, it is there that we shall find the origin of comprehensive Town Planning for great modern cities.

In a subsequent lecture Mr. Haywood dealt with the subject of "Amenity."

In the records of town building traced in previous lectures through 4,500 years, the two outstanding factors to which attention had been directed, and by which successful town design had been measured, were structural convenience and beauty of form.

Where one of these factors had been deficient in early cities, convenience had usually given way to amenity. Athens did not forget convenience, she condemned it. She concentrated on beauty. Florence makes no reference to utility in her decree of 1294, but sets about the rebuilding of Santa Maria Reparata with much "prodigality of magnificence." And it will usually be found that where a community thinks collectively a gracious environment will accompany convenience, or exist without it.

In modern Paris, beauty has been as consistently sought for and as successfully achieved as traffic convenience and general plan efficiency, although it is probably more difficult to secure amenity and convenience together than either of them apart. It is also evident that to the promoters of our own Town Planning Act of 1909 both factors were of equal importance, yet it cannot be said that they retain this relation in practice, and hence it is necessary to stress the value of beauty in towns. This value can be most effectively demonstrated in the great building periods of the past, but while the past may stimulate by example it cannot properly serve as a model. Modern cities which seek to give their growth an appropriate expression must effect this by an imaginative treatment of their own vital energies. Industry and its equipment have much potential beauty, and industrial cities offer great opportunities for a new type of expression in civic design.

Mr. Thomas Hardy, O.M., Hon. D.C.L., and Mr. Henry Laming, M.A. have been elected to an Honorary Fellowship at Queen's College, Oxford. The College has long had a connection with Dorset through the ownership of property in part of the country which Mr. Hardy has made famous.

The Lancashire Higher Education Sub-Committee propose to include in their building programme for 1923-4 a new building for the Nelson Secondary School. The school is considered a matter of urgency, and the Nelson Corporation have a suitable site available. Other schemes include a new building for the Secondary School at Ashton-under-Lyne and new premises for Prescott Grammar School.

R.I.B.A. Exhibition of Architecture.

[Mr. Paul Waterhouse has written the following Foreword to the catalogue of the forthcoming Exhibition, of which we shall give a notice in our next issue.—ED.]

What did Wren say, the great Sir Christopher, to whom next year we shall offer the honours of bicentenary remembrance? Here are his words: "Architecture has its political use, public buildings being the ornament of a country. It establishes a nation, draws people and commerce, makes the people love their native country; which passion is the original in all great actions of a commonwealth."

Whether these words were a necessary reproof to the citizens of the seventeenth century, or whether they were but an echo of the popular appraisal of the architect, it is happily a fact that in England of to-day there is much less need to remind people of the importance of architecture than there was fifty, forty, or even thirty years ago. Men of commerce, men of trade, are nowadays aware that there is "something in it"; and it is rare to find the promoter of a big building—however utilitarian his views—who does not appreciate the necessity of getting skilled help towards shaping his structure in accordance with recognised rules of propriety. There are several reasons which will account for this—and perhaps the chief is one for which we owe a vote of thanks to prominent individuals in the modern world of trade. These men, wise enough to know that good taste was an asset, and clever enough to know where and how the good taste could be engaged, have been setting a standard from which their rivals and imitators dare not, for their very lives, fall back. Nor must we overlook the no less commendable, though less unexpected, fidelity of our modern banks, insurance offices, municipalities and public companies to the claims of architecture—the fitting mistress and handmaid of their constructional achievements. I shudder to think what would be the present aspect of London if certain vast enterprises of the last twenty-five years had come to birth in the third quarter of the past century. Those were the days when the flames of Gothic enthusiasm had died down, only to leave among certain architects an impression that, inappropriate as Gothic traditions were to the needs of modern commerce, the Gothic school had at least broken down all obligations towards the starched correctness (not *my* definition) of the classic rule. There followed, as an ignoble sequel, a period which it would be a mere compliment to call an age of license. It had not even the immodest charms of licentiousness. The unhallowed result of the sense that traditional correctness did not matter introduced a theory, pleasant enough for the ignorant, that any whim which could find its way into the brain of any architect, however untutored, might appropriately find its way out of that brain on to his drawing-board and thence on to his unhappy creations.

It is to this train of reasonless reasoning that we owe most of the faults which make a large part of the City of London, and a larger proportion of Southwark, nightmares of jaded and mongrel effort.

"Originality," its producers would have called it, or possibly "design." But every drawing is a design and every building is original in the sense that it has an origin. It is only by the strangest freak of language that we confine this term to those things whose origin is as far as possible undiscoverable. Some would define as original those things "whose origin is in themselves," which are, in fact, contrary to all laws of Nature. Let it be said at once that spontaneous generation is no fit method of birth for architecture. It is not only indecent but happily impossible, for the product of such birth, whatever name it may take, cannot have the architectural nature.

I am quite deliberately certain that British architecture to-day is healthier, stronger, and nearer to the unattainable level of pure art than it has been for a hundred and fifty years. If this were not a public document, I would go further, and for this reason—that great and beautiful as were the achievements of the eighteenth century, miraculous as was Wren, magic as is the charm of his predecessor, Inigo Jones, and his great successor Gibbs, there was not in the days of those heroes, as there is to-day, so vast a company of contemporary architects among whom safe choice might be made.

To-day, it is true, there are men in the first flight to whom others are secondary; but the number of the secondary is legion, and by calling them secondary I am not calling them second best. Many of them are only on the second step because of certain conditions of standing room, and every year our systems of well-devised rivalry bring fresh men into prominence from the deserving ranks of the juniors or of the less known. Recent enquiries have led me to believe that architectural competitions, which are to many the ladder to fame, are nowhere in Europe conducted with such spotless fairness as characterises our British methods in this respect. Certainly there can be no land

which surpasses the British Isles in the success and universality of its present systems of architectural education—a success and universality which are, I believe, daily increasing. I only allude to this educational subject in order to point out that no person or corporation desirous of erecting a truly architectural building on lines of authentic and scholarly architecture can have any excuse in Britain for failing to find an architect. I am not forgetting the supremacy of France in scholastic architectural training, nor am I overlooking the present laudable efforts of Paris to weld into that training a sounder knowledge of construction; but I do say, armed with some personal acquaintance with modern educational conditions and free from personal doubts, that the employers or would-be employers of architects in this country have before them for their open choice an abundant army of highly trained men in whom taste, knowledge and energy have been nurtured by the friendliest of rivalry and the most enthusiastic zeal.

In setting up this Exhibition it is not pretended that all the exhibits are of equal merit, still less that the very best work of our time is fully represented. Various circumstances have hindered the inclusion of certain works which the Selection Committee would have desired to see included, and which the visitors to the Exhibition will very probably expect to find. It will be easily understood that suitable photographs or drawings are not always available.

At least, it may be said that the Committee have done their best to make the collection illustrative of a fairly wide area of architectural enterprise and to exclude unworthy examples.

"The Architect" Fifty Years Ago.

NOVEMBER 30, 1872.

PALAIS DE JUSTICE, PARIS.

The sums of money lately expended and to be expended on this great centre of law amount to a startling total. The credits granted for the purposes of restoration and new works in the last and current years amount, in round numbers and in English money, to £78,000, all with the exception of £10,000 for the repair of the damage caused by the fire during the Communal reign of terror. Of the above sum £30,350 has been expended, and although the roof has been repaired and several courts have been completely or provisionally restored, the list of works still to be effected is terribly long. The estimates for the reconstruction and repairs of the parts destroyed or injured by the fire, and for the underpinning of the outer and inner walls, amount to £55,560, and the Municipal Council has included nearly the whole of that sum in the budget for the year 1873. In addition to this, the sum of £12,000 is included in the same budget for the consolidation of the foundations injured by the infiltration of the Seine, and the carrying on of the new façade and other works already in hand. Of these works the construction of the grand flight of steps on the western side of the edifice and that of the assize courts have already cost nearly £380,000, and are estimated to cost about £34,560 more. This cost has been largely increased by the fact that the whole of the scaffolding and centerings, and much of the prepared material, were destroyed by the fire.

These monumental steps, with a new entrance hall, will form the grand entrance of the Palais de Justice from the centre of the city. The vaultings, the steps, and the pavement will be formed of stone from Saint-Glie, and the balustrading of Comblanchien stone.

Finally, there has already been spent on the new courts, the extensions of the building, and on repairs necessitated by the fire, the large sum of £1,050,724; and the addition of the amounts of the various estimates for the works remaining to be done swells the sum to £1,434,312.

Mr. Alexander Percy Durlacher, F.R.I.B.A., of 15 New Bridge Street, of Messrs. Gale, Durlacher & Emmett, architects, who died at 26, Chester Terrace, Eaton Square, on July 14 last, left estate of the gross value of £4,884 14s. 6d., of which £4,655 is net personalty.

The death has recently occurred, at Stoke-on-Trent, of G. W. Hilton, architect, at one time a member of the firm of Jones and Hilton of Burslem and Stone, Staffs, but latterly practising on his own account in Stoke-on-Trent. A man of considerable ability yet quiet and unassuming, he devoted much time and thought to domestic architecture and to the problem of laying out residential areas, of which the Harpfield Estate, Harthill, Stoke-on-Trent, is a notable example of his work. He was a strong believer in concrete for houses, and built for himself, largely with his own hands, a "Mono-Bloc" concrete house, a house which has proved a complete success and of which he has given a full account in his "Concrete House," published by E. & F. N. Spon.

Whitgift Hospital, Croydon.

Among the buildings of historic and artistic interest possessed by Croydon one of the most notable is the Whitgift Hospital, which occupies a prominent position in North End—the main street of the town. Queen Elizabeth, during her reign, appears to have paid several visits to Archbishop Whitgift, whose palace was situated in Croydon: and what is now known as Whitgift Hospital was built by that ecclesiastic towards the end of his life for the benefit of poor and aged people of Lambeth and the town. The date of its construction is 1599. The buildings are two storeys high and occupy the four sides of a quadrangle. They include quarters for fifty people, a chapel, great hall and other interesting features. While it has been somewhat tampered with in restorations that have taken place from time to time, it remains a generally complete example of an Elizabethan building, very expressive of its purpose and of considerable charm. The value to Croydon of having a building of such interest and beauty as this is—situated in a prominent position in the town and drawing the attention of countless people to the historic importance of Croydon and its part in the life of the Elizabethan period—is very considerable, and there can be no question that such a building has a distinctive value extending far beyond the limits of the town in which it is situated.

It appears that for a long time a section of townsmen (as represented by certain of its borough councillors) has desired the sweeping away, or at least the partial demolition, of Whitgift Hospital. Presumably some financial or other material advantage is expected to result from such a change. So strong, anyway, has been the desire that there has been a deliberate setting back of relatively new buildings in George Street, adjacent to the Hospital, in order to make it appear that the old building was an obstruction projecting beyond the general line of the road. A similar position has been deliberately created in recent years on the return front in North End, where, instead of the line of Whitgift Hospital being adopted as the new improvement line for frontages of the adjacent reconstructed premises, their main wall has been set back several feet, with the obvious desire to bring about a similar situation in North End to that which now obtains in George Street. There does not seem the slightest excuse for the action so taken, except as a means of creating a situation that might assist the desire of those who wish the Hospital to be destroyed, for it is clear that the sweeping away of Whitgift Hospital is not in any way necessary to effect the road improvements that the circumstances require.

During the last 20 or 25 years there has fortunately existed in Croydon a very active and enlightened Whitgift Preservation Committee who have vigorously opposed interference with the old buildings, and who, between the years 1909 and 1912, successfully set aside the Croydon Council's destruction scheme and, with the valuable assistance of the Local Government Board—which showed very splendid public spirit in the matter—induced the Council to adopt the Defence Committee's scheme—i.e., for the setting back of the "bulge" in the line of road that occurs on the Western side of North End, opposite the Hospital, together with other frontage improvements calculated to effectively assist traffic difficulties and which, apart from its obvious merits as a road improvement scheme, avoided interference with the Whitgift Building. On the basis of this scheme (formally adopted by the Croydon Council in 1912 and approved by the then Local Government Board) grants of money have been made, and it would naturally be assumed that the Council were in honour bound to carry it into execution as opportunities presented themselves. Recently, however, there have been indications of a deliberate attempt to set the approved scheme aside and to revert to the old purpose of lopping off the Hospital in order to spare modern buildings, devoid of any interest at all, that exist west of it on the opposite side of the road. It is known, in fact, that the Croydon Council is promoting a Bill in Parliament to obtain powers for sweeping away the Whitgift building. Anything more shortsighted in the interests of what really matters in the town of Croydon can hardly be imagined, and the action contemplated seems to be without a shadow of excuse. An inspection of the conditions on the site or of a plan of the road, makes it obvious to anyone competent to judge the situation that the scheme proposed by the Preservation Committee, and eventually adopted by the Croydon Council and approved by the Local Government Board in 1912, as already mentioned, represents from every point of view the obvious way of dealing with the traffic conditions in the part of the main road in question and, moreover, assists the problem that arises from the restricted condition of Crown Hill—the branch road that enters the highway at this point.

On hearing of the course now proposed to be taken by the Croydon Council the Royal Institute of British Architects took immediate action and on its initiative a conference has taken place on the question at which the whole situation was carefully

reviewed by representatives of the Royal Institute, the Whitgift Hospital Preservation Committee, the Society for the Protection of Ancient Buildings, the Town Planning Institute, the London Society, the Town Planning Committee of the R.I.B.A., the National Trust, the London Survey Committee, and the Surrey Archaeological Society. As a result all these bodies are not only agreed as to the local and national importance of preserving Whitgift Hospital as a valuable relic of Elizabethan architecture, but have decided to support the 1912 scheme, as providing a practical and effective road improvement, which meets traffic requirements without the necessity for any interference with the Hospital. They have resolved, moreover, to take further steps to emphasise the importance of this view in quarters where it may receive due weight, and hope that the very valuable principle of avoiding, wherever possible, interference with historic and beautiful buildings may be increasingly supported by public opinion.

Forthcoming Events.

Friday, December 1.—Royal Institute of British Architects Opening of Exhibition of Contemporary British Architecture at 9 Conduit Street, W. 2.30 p.m.

Monday, December 4.—Royal Institute of British Architects. Business meeting at 9 Conduit Street, W. 8 p.m.

Tuesday, December 5.—Architectural Association. Conversation at 34-35, Bedford Square, W.C. 8 p.m.

—University of London, University College. Public Lecture by Mr. Arthur J. Davis, F.R.I.B.A., entitled "The Principles of Architectural Planning." 5.15 p.m.

Wednesday, December 6.—Royal Archaeological Institute. Meeting in the apartments of the Society of Antiquaries, Burlington House, Piccadilly, W. Paper by Mr. W. H. Ward, M.A., F.S.A., F.R.I.B.A., entitled "Some Burgundy Churches." 5 p.m.

St. Paul's Ecclesiological Society. Meeting at 7 St. Andrew's Street, Holborn, E.C. Paper by Rev. A. Shirley, B.A., entitled "The Ruined Monastery of Poblet, near Tarragona, Spain." 8 p.m.

—Royal Society of Arts. Meeting at John Street, Adelphi. Paper by Mr. H. Emory Chubb, M.I.Mech.E., entitled "Recent Developments in the Manufacture of Safes and Strong Rooms." 8 p.m.

Thursday, December 7.—Reading Society of Architects. Meeting in the Art Gallery, Reading. Paper by Mr. W. McG. Eagar entitled "Town Planning for Industry and Health." 7.30 p.m.

Friday, December 8.—London Society. Meeting at 18 John Street, Adelphi, W.C. Paper by Mr. H. A. Cox, entitled "London before the Great Fire and Now." 5 p.m.

Town Planning Institute. Meeting at the Institution of Civil Engineers, Great George Street, Westminster. Paper by Professor P. Abercrombie, M.A., A.R.I.B.A., entitled "The Site for London University." 6 p.m.

The Henry Saxon Snell Prize.

The subject given by the Royal Sanitary Institute for essays in competition for this prize was "Improvements in the Sanitary Appliances and Fittings for New Housing Schemes, having regard to Efficiency and Economy." Eight essays were received, and they have been brought under the consideration of the Council.

The adjudicators appointed for the competition were: Louis C. Parkes, M.D., D.P.H., Mr. A. Saxon Snell, F.R.I.B.A., Sir Henry Tanner, C.B., I.S.O., F.R.I.B.A., and Professor E. R. Matthews, F.G.S., A.M.Inst.C.E., nominated by H.M. Office of Works.

Acting on the advice of the adjudicators the Council do not see their way to award the prize to any one of the competitors. They have decided, however, in view of the considerable amount of work and preparation involved in regard to the following five essays, that the amount offered for the prize shall be divided equally between the writers: "Finis Coronat Opus," "Reliable," "Dum Spiro Spero," "Tubalcain," "Efandec."

The adjudicators state that there are some useful suggestions in these essays, but on the other hand there are some which they consider would prove unsatisfactory in practice.

Dunmow District Council is considering a scheme to acquire a workhouse for conversion into flats.

Mr. M. G. Weeks, an inspector of the Ministry of Health, held an enquiry at West Bromwich last week into an application by the Town Council for sanction to borrow £22,000 for the construction of a sewer from Rydding Lane to the sewage farm.

The Organisation of Building Work.

The third public lecture of the Northern Polytechnic was given by Mr. F. J. Gayer, F.I.O.B., Past President of the London Master Builders Association and Vice-President of the Institute of Builders.

Mr. Gayer commenced his lecture by pointing out some of the many difficulties that the London master builder encountered either from idiosyncrasies of those in authority, the difficulty in some cases of convincing a building owner that it is to his interests to employ an architect and a surveyor, or from certain stringent clauses in a building contract, all of which tend to destroy the value of organisation and to cause in many cases serious financial loss.

He then traced in detail the progress and routine of building work from the invitation to tender to the completion of the work and the final settlement of accounts. Upon receipt of the necessary bills of quantities the builder will seek quotations for certain materials. He will make certain that these quotations are all "delivered to site," or will add to the quotations any railway carriage, cartage, etc., before incorporating same in the items in the bills of quantities.

For the accurate framing of an estimate, great experience is required of detailed and analysed costs. The successful estimator is one who has taken careful records of labour costs, covering capacities, wastage, shrinkage and consolidation of materials. By reason of the highly technical nature of the work, there may be room for some small differences of opinion, based on varying records, but there is certainly no justification for the extraordinary differences that are occasionally revealed in the tender lists. These variations appear to be more marked when the work is the result of public tendering than in cases where a selected list of builders are invited to tender. It was suggested that these differences are due sometimes to ignorance, sometimes to a deliberate intention to get a job at any price in the hope that Carey Street may be escaped or at least delayed, and sometimes to a genuine mistake. These facts clearly point to the great need for more research and the publication of more reliable data.

During the execution of building work it was suggested that clear records should be kept of all materials sent to a specific contract in order that they could be used as a rough check on the bills of quantities. By this means any variation can be readily noted and the way paved for an equitable adjustment at the completion of the contract. The timing of the arrival of materials in logical sequence was one of the great points of practical organisation, and one that needed very special attention, since failure in this direction would frequently be the cause of loss to the builder. A knowledge of the subsoil of a building site was often a big factor in estimating, especially on large works, since the question of pumping and bailing to keep a site free from water was an item which called for the greatest possible consideration. The estimator, in addition to his many qualifications, required to be a "water diviner." Mr. Gayer pointed out there were two systems in operation with regard to maintaining contact between the office and the works, one system being the employment of a walking foreman or works superintendent, and the other of passing the responsibility of this work to the estimator. The latter system was the one that Mr. Gayer advocated, since it placed the estimator in a much better position for settling the variation account and incidentally gives the estimator an opportunity of adding to his practical knowledge, at the same time assisting the general foreman with the more theoretical side, a combination which undoubtedly produces the best results.

Labour, as a very big factor in building organisation, naturally came under review. Overtime now can only be worked by permission of a joint committee of employers and operatives, a system which at times proves rather irksome, and, moreover, would appear to be totally unnecessary, since no federated employer may work overtime without paying additional rates from 25 per cent. to 100 per cent. for time so worked, rates which would appear an adequate safeguard against an employer working his operatives too many hours unless the circumstances justified the extra hours with the consequent extra payment.

The present hours of labour were referred to as being unreasonably short, and as depriving the operative of a means of adding to his wages without in any way causing hardship to the worker. It was stated that the present working hours were as unreasonably short as they were unreasonably long in the last century.

The actual form of contract was the next point surveyed, with the important question as to whether or not the quantities should be incorporated as part of the contract. The lecturer unhesitatingly stated that there was only one fair system, and that was that the quantities which had been used in arriving at a tender price should be included as part of the contract. This course had the virtue of granting the builder payment for any work not

included in the quantities and in a like manner an omission for any work included in the quantities but not executed.

Reference was made to public and other bodies who endeavour to use their own special form of contract and ignore the standard form which had been agreed between the R.I.B.A., the National Federation of Builders, and the Institute of Builders. These independent forms of contract are generally "models of iniquity," and it is difficult to understand why documents which are the production of one man or of one public body should be preferred to those which have been produced after long deliberation by all interested parties and upon which reasonable agreement has been reached.

Sub-contracting clauses of the standard form of agreement were also dealt with, and the difficulties encountered under this head were pointed out.

Arbitration was referred to as being infinitely more satisfactory than the Courts when dispute arose, since most of the cases would naturally be of a highly technical nature. Labour disputes when on the works of a federated builder have been reduced to a minimum through the conciliation schemes in operation between the employers and the operatives. Mr. Gayer outlined the system by which these disputes are dealt with.

Many questions were asked by members of the audience, and the vote of thanks to the lecturer was put by Dr. R. S. Clay, B.A., D.Sc., from the chair and carried unanimously. The next paper will be read by Mr. R. R. Butler, B.Sc., A.C.I.C.S., on "Composition and Jointless Flooring," at 7 p.m. on December 7.

The L.G.O.C.'s Workshops at Gunnersbury.

On November 27, the London General Omnibus Co. received a party of the Scientific and Trade Circle of the Institute of Journalists, in order to show them the Repair Workshops recently erected at Gunnersbury, along the Chiswick High Road. The visit had been arranged at the instance of Mr. L. Gaster (Chairman of the Circle) by the courtesy of Mr. H. E. Blain, C.B.E., Assistant Managing Director, who received the party upon arrival. Motor omnibuses were detailed at St. James' Park Station to convey the journalists to the Works, and at the conclusion of the visit re-deposited them at various points to suit their individual convenience.

The workshops, occupying an area of thirteen acres upon a total site over 31 acres in extent, are equipped for the thorough overhaul and refitting of that indispensable servant of the public, the ubiquitous motorbus. Even as we read of the great sausage factories overseas, receiving the pig *in esse* at one end of the installation and delivering the canned goods at the other, and further (as we are told), reversing the process, so as to restore the living pig once again at the original point of entry—so here, *mutatis mutandis*, the car is dismantled to the last bolt and rivet (if necessary), upon its inward journey, and built up and equipped once more to its erstwhile finished condition, ready to start again on 30,000 miles of roadwork.

Economy of labour is with the Company an article of faith—economy in this sense of the word, that the workshops have been so laid out, that the work shall proceed from process to process and from stage to stage, without necessitating any return on the inward route during dismantling, or upon the outward route during re-assembling.

To pursue the simile of the pig and the sausage a bit further, just as the Canadian potters claim to use every portion of the pig except the squeal, so here at Gunnersbury one gets the impression of a lack of waste which is admirable at any time, but particularly so in these days of high taxation and mass-unemployment. All seems to go as orderly as a parade drill, with similar efficiency as the outcome.

After an interesting inspection of the shops, Mr. Blain offered some remarks, which were pictorially illustrated on the screen, upon the subject of "Safety First," that child of six years' growth, whose forefather is Lord Leverhulme, but whose immediate progenitor is Mr. Blain. What he and other co-workers have done in the way of propaganda in the interests of the general public, he himself has practically introduced into the organisation he controls, with the result of a great lessening in the tale of casualties. It will serve to indicate the good effected by this propaganda, to state, that whereas "in 1914 there were no fewer than 55,700 accidents to persons or property in the Metropolitan Police District," this number has been reduced by 1920 to a year's total of 45,700.

The Safety First Council and the British Industrial Safety First Association devote much money and effort in propagating their views, and the least the public can do is to practice the principles advocated. Their latest effort is the "Keep to the Left" movement, but this has so far not been adequately supported. As Mr. Blain points out, the alteration will come, whether it be sooner or later.

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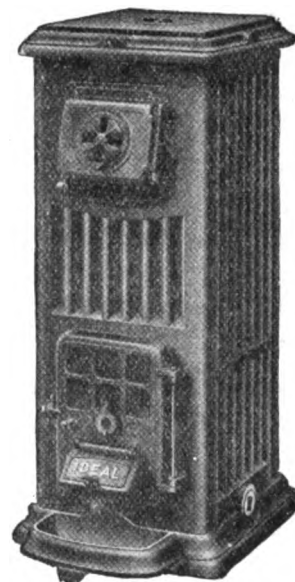
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Picture Preservation.

Professor A. P. Laurie, Professor of Chemistry to the Royal Academy, in the first of his annual course of lectures at Burlington House, W., dealt with "The Preservation and Cleaning of Pictures."

Professor Laurie began by saying that the question of the preservation and cleaning of pictures was not a purely scientific one, but involved certain æsthetic considerations, and he suggested that there had been some confusion of thought on the whole subject. To deal first with preservation, it might be necessary—to take an extreme case where the paint was separating itself from the canvas—to reline the back or to remove the old canvas and back it with fresh canvas in order to save the picture itself, and this would necessitate the removal of the old varnish and replacing it by new varnish. Or a picture might be so obscured by old, dirty, and discoloured varnish as to make it absolutely necessary that it should be cleaned in order to be able to see anything at all. In both these cases some form of treatment was necessary and justifiable. A picture might have certain flakes of paint off it and yet be otherwise in good condition, and in such a case it would probably be considered necessary to restore the absent pigment. Here, however, we get upon purely æsthetic ground as to whether such a restoration is justifiable. In order that the general appearance of the picture should convey to the observer what the artist intended, it is necessary to replace the defective part; but from the point of view of the minute and careful student of the picture, it is essential that such replacement should be known. This difficulty can be overcome by the taking of photographs of the picture before repair, so as to put on record what is the work of the master and what is the work of the restorer. With reference to the cleaning of pictures, it may be taken as a general principle that, beyond such cleaning which could be done by wiping with a nearly dry sponge or by rubbing up with turps, no cleaning should be done unless it is absolutely essential, owing to the serious obscuring of the original picture. It must be understood that the solvents used in picture cleaning for the removal of varnish will also remove the paint layer, and therefore the avoidance of injury depends entirely upon the skill of the cleaner. It is evident, therefore, that such cleaning should be done under the most careful observation of experts who are prepared to stop the process at any moment, and that partial cleaning should be preferred to complete cleaning with the danger of the removal of paint. With reference to the methods used, even although the paint layer is not actually dissolved by the solvent, it is swollen and softened, and therefore all friction with wads of cotton wool should not be allowed. While not prepared to give a final opinion as to the safest methods of cleaning, the Professor suggested that where alcohol is used castor oil should be laid on the surface with a soft brush, and then a mixture of castor oil and alcohol dabbed on with a soft brush, and removed by diluting with turpentine and sopping up with a large dry brush. Where alcohol is not a sufficiently powerful solvent, copaiba balsam emulsified with ammonia might be used, a preparation of copaiba balsam thinned with a little turps being laid on the surface first. If any friction is to be applied it should be done with a soft rubber point, and at every stage examined under a powerful magnifying glass. No important public picture should be cleaned until it has been authorised by a committee of experts; and the cleaner himself should be present and explain exactly what he is going to do, while everything he does should be under the direct supervision of the head of the public gallery.

General.

The will of Mr. John Bryce, F.R.I.B.A., of Edinburgh, who died on August 22, has been proved at £34,831 gross.

Mr. Percy B. Houfton, of Chesterfield, is the architect for some fifty houses about to be erected at Rainworth, near Mansfield, Notts, for the Bolsover Colliery Co., Ltd.

M. Albert Besnard, the French painter, who is director of the Villa Medici, Rome, is to succeed the late M. Léon Bonnat as director of the Ecole Nationale des Beaux Arts, Paris.

The Port of London Authority has acquired land for the building of another dock on the north side of the Royal Albert Dock, and has decided to spend £14,000,000 on modernising the port and works.

The Council of the Surveyors' Institution have accepted an invitation from the Scottish Branch to hold the Annual Country Meeting next year in Edinburgh. The dates fixed for the meeting will be announced later.

Messrs. Gelder & Kitchen, F.R.I.B.A., Hull, have prepared plans for a Methodist Central Hall, which it is proposed to erect in Old Market Street, Bristol, at an estimated cost of £45,000. It is hoped to lay the foundation-stone in March next.

The Gelligaer Council last week accepted the tender for the erection of 40 houses at Bargoed of Messrs. E. J. Davis & Co.,

Bargoed, for £15,250, or £381 5s. per house. The houses are to be built in stone. In July last the lowest contract was for £413 11s. per house.

The Birmingham Tame and Rea District Drainage Board, at their meeting last week, adopted a recommendation to borrow £34,000 for the enlargement of the storm-water tanks at the Nechells works. A bio-aeration plant is to be laid down at Minworth at a cost of £17,500.

The Cardiff Housing Committee are to send a deputation to the Ministry of Health to seek permission to build at least one thousand houses. This action arose out of a letter from the Ministry refusing sanction, on account of their high cost, to the proposed immediate erection of fifty houses.

Plans have been passed at Grangemouth and warrants granted to Scottish Oils, Ltd., for the erection, at a cost of £120,000, of buildings, tanks, pump-houses and huts for the accommodation of ships' crews and a timber jetty at the docks. This is the biggest plan ever passed by the Grangemouth Court.

The Birmingham Corporation have invited applications from builders for the erection of 110 non-parlour-type houses on the Alum Rock Estate (Contract 115), and 16 parlour-type houses on Nansen Road (Contract 116). Mr. Herbert H. Humphries, M.Inst. C.E., the city engineer and surveyor, is acting as Executive Officer for Housing Schemes.

The Middlesex Education Committee have informed the Board of Education that the following urgent matters should be proceeded with during the year ending March 31, 1924:—Harrow-on-the-Hill: erection of new school in Greenhill Crescent. Teddington: erection of new school for girls. Feltham: purchase of site for new school. Southgate: erection of new school in Bourne Hill.

St. Cuthbert's Co-operative Association was last week granted, at Edinburgh Dean of Guild Court, powers to proceed with the erection of a bakery on the site of Port Hamilton, Fountainbridge. The building will be 250 feet square by 70 feet high, and will cost about £250,000. The architect is Mr. T. P. Marwick, York Place, Edinburgh. The erection of the bakery is the beginning of the development of the canal area.

The London County Council have referred to their Public Control Committee an instruction to consider the report how far fog in London is caused by the pollution of the atmosphere due to preventable causes; whether by a larger use of electricity for power and other purposes the atmosphere of London might be improved, and whether any, and, if so, what, further powers are required to deal with the emission of smoke in London.

At Edinburgh Dean of Guild Court Warrant was granted to Messrs. J. Cunningham to convert the old Council Chambers, Constitution Street, Leith, into offices; to Messrs. John Smith and Sons to erect flatted villas at Argyle Crescent, Portobello; and to Edinburgh Royal Blind Asylum to convert old Gillespie School buildings into workshops.

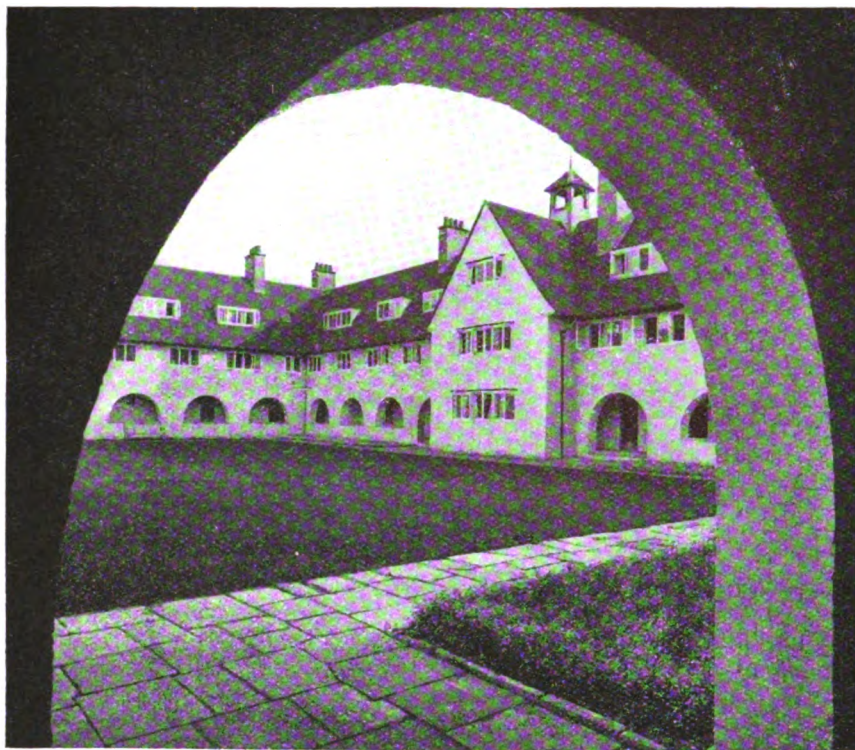
Blackpool Art Gallery Committee have passed a resolution protesting against the misrepresentation of their attitude towards the Hon. John Collier's picture "Clytemnestra." The canvas was the subject of criticism in Blackpool, and the town council referred to the General Purposes Committee a proposal to buy the painting. "Clytemnestra" was in the end sold to a private buyer. The Art Gallery Committee state that it had been suggested that they described the picture as wicked and nauseous, and banned it. It was, they explain, critics outside the Town Council who said the picture was nauseous.

A committee appointed by the Government of Bombay, under the chairmanship of Mr. T. Harvey, Superintending Engineer of the Development Department, to investigate into the utility of reinforced concrete for structures in the city of Bombay, have concluded that deterioration of the concrete was in every case traceable either to defective design, inferior materials or indifferent workmanship. The committee believe that the quality of the concrete has a direct influence on the preservation of steel, since there is no evidence that steel embedded in sound concrete with adequate covering has been adversely affected by the climatic conditions of Bombay.

Moor Park, Ltd., was registered on November 18 as a public company, with a nominal capital of £300,000 in £1 shares (100,000 6 per cent. cumulative preference and 200,000 ordinary). The objects are: To adopt an agreement with the Right Hon. Lord Leverhulme; to acquire certain lands and building at Moor Park, Herts; to lay out and prepare the same for building purposes, with roads, open spaces and recreation grounds; to enter into contracts and arrangements with builders and others; to carry on business as builders, contractors, manufacturers of and dealers in stone, timber and hardware and other building requisites, dealers in live stock of all kinds, farmers, land and estate agents, etc.

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WATERLOW COURT.

M. H. BAILLIE SCOTT, Architect.

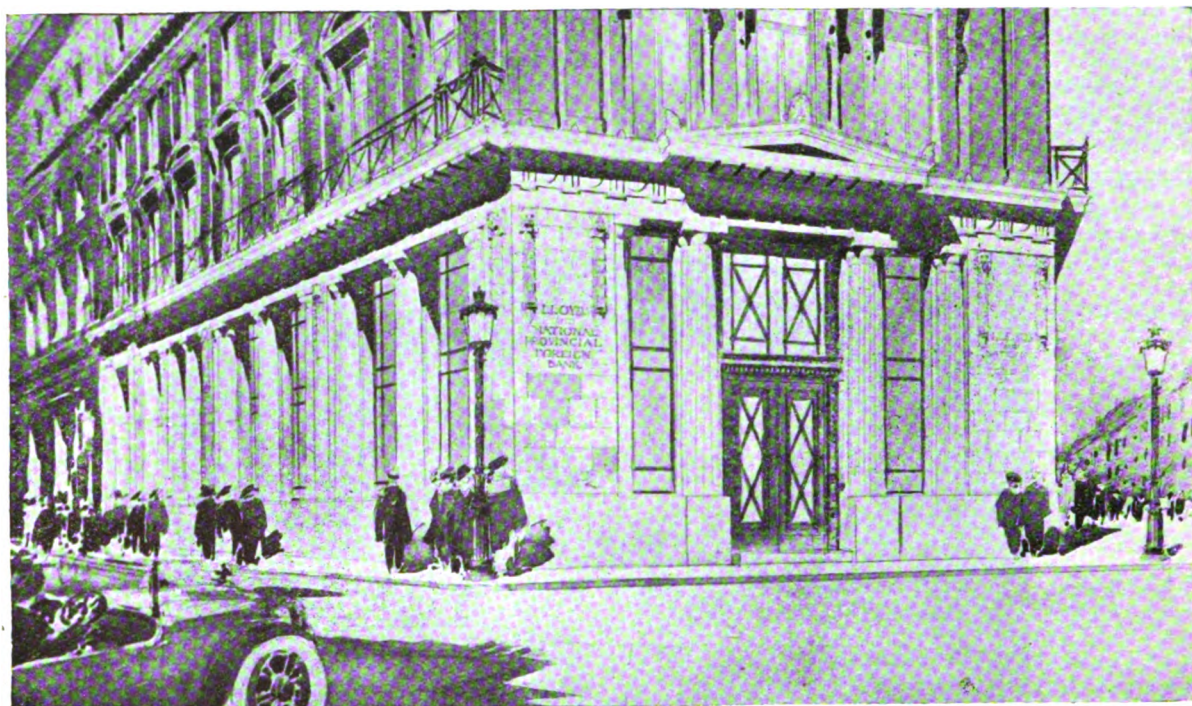
Architecture at the R.I.B.A.

The present Exhibition of British Architecture at the R.I.B.A. is interesting both to the public and the profession. To the former it probably possesses the charm of novelty, for very few among the general public either know or remember much of the buildings they may see casually in their daily lives; while it is also interesting to architects, most of whom have seen the greater part of the work shown either actually or in the professional papers, because they see within the confines of a few rooms a fairly representative collection of the work of a quarter of a century.

We agree with the President that in the ranks of architects of to-day we could find more ability than in the times of Wren, and that while we have not among our ranks one who could rival the greatest architect England has produced, we have a greater supply of men of distinct talent and education than was available in the seventeenth century. This, however, only covers part of the canvas of achievement, for in the seventeenth century traditions of craftsmanship were still a living force, as is evidenced in every corner of the land, whereas the want of any similar tradition to-day is likewise evidenced over the length and breadth of England damned by the horrid efforts of men who have no knowledge and of tradition. The average man of two centuries ago did little that was æsthetically wrong; the same average man to-day does nothing that is æsthetically right, and we are sometimes inclined to wonder whether the modern architect's rôle is not to cleanse the outside of a bowl which is, and must be, full of ravening wickedness.

The exhibition rightly begins with a series of photographs of the work of Ernest Newton and his sons, for Ernest Newton throughout his life never designed anything which will not bear the closest scrutiny, and his simple and quiet buildings have the immortality of perfect design. There is in them no trace of a desire to distinguish by unusual effects, but a sense of proportion and detail which will be even more appreciated in another century than to-day. Mr. Guy Dawber's work, unlike that of many who were closely associated with Sir Ernest George, has always shown a real appreciation of the qualities of old English building; and we are glad to see some excellent examples of the design of Messrs. Oswald Milne and Paul Phipps and Mr. Clough Williams-Ellis, as they are architects whose design is well to the forefront of modern domestic work. Messrs. Romaine-Walker and Jenkins are well represented by a series of illustrations of very interesting work at Knowsley, Luton Hoo, Chatsworth, and Derby House, all of which bears the impress of refined scholarship.

Sir Edwin Lutyens, as might be expected, is represented by a series of important works, all of which are familiar to us. We believe that the house at Ilkley will in after years be regarded as one of the most successful, if not the best, of the designs he has produced. It has not the curious note of tentative effort and experiment which sometimes seems to mar the design of a genius, a note that suggests that Sir Edwin may be more interested in processes than in results. We should have liked to see Mr. Baillie Scott



LLOYDS & NATIONAL PROVINCIAL FOREIGN BANK, PARIS. PAUL WATERHOUSE, Architect.

represented by a larger selection from his work, for only those who have examined it carefully in execution fully realise its unusual merit, and what some have put down to affectation is in reality clearly seen to be the outcome of the conviction of one whose originality is of a very unusual order.

Church architecture is represented in Talacre Abbey, Wales, by Messrs. Nicholas and Dixon—Spain; St. Germain's Church, Edgbaston, by Mr. Edwin Reynolds; Pretoria Cathedral, by Mr. Herbert Baker; Khartoum Cathedral, by Mr. Robert Weir; Westminster Cathedral, Liverpool Cathedral, and a number of lesser works, all of considerable and some of unusual merit and interest.

The series of works of Messrs. Lanchester and Rickards includes their first and greatest success, the Cardiff Municipal Buildings, here wrongly described as the work of Messrs. Lanchester and Rickards, instead of Lanchester, Stewart and Rickards. Their work at Cardiff was never equalled afterwards, and certainly never excelled, and we have always attributed this to the influence of that third partner in the combination whose untimely death weakened one of the strongest partnerships of a generation. Noteworthy and able as was the work at Westminster and Deptford, it never attained to the mastery shown at Cardiff or its harmonious completeness any more than Dance's other works ever equalled his creation of Newgate Prison. Rickards was probably almost handicapped by his wonderful facility of draughtsmanship, which tended to become an end rather than a means. Messrs. Mewès and Davis are illustrated by their "Morning Post" Offices, the Ritz Hotel, the "Aquitania," and that most successful of all their works, the Royal Automobile Club, carried out in conjunction with Mr. Keynes Purchase, and all of them distinguished by a distinct reminiscence of their sympathy with French precedents.

We are glad to see a fine collection of photographs of the London County Hall, the merits of which we sometimes feel the profession has hardly done full justice to, but which will receive its full meed of appreciation in years to come. The National Museum of Wales and the

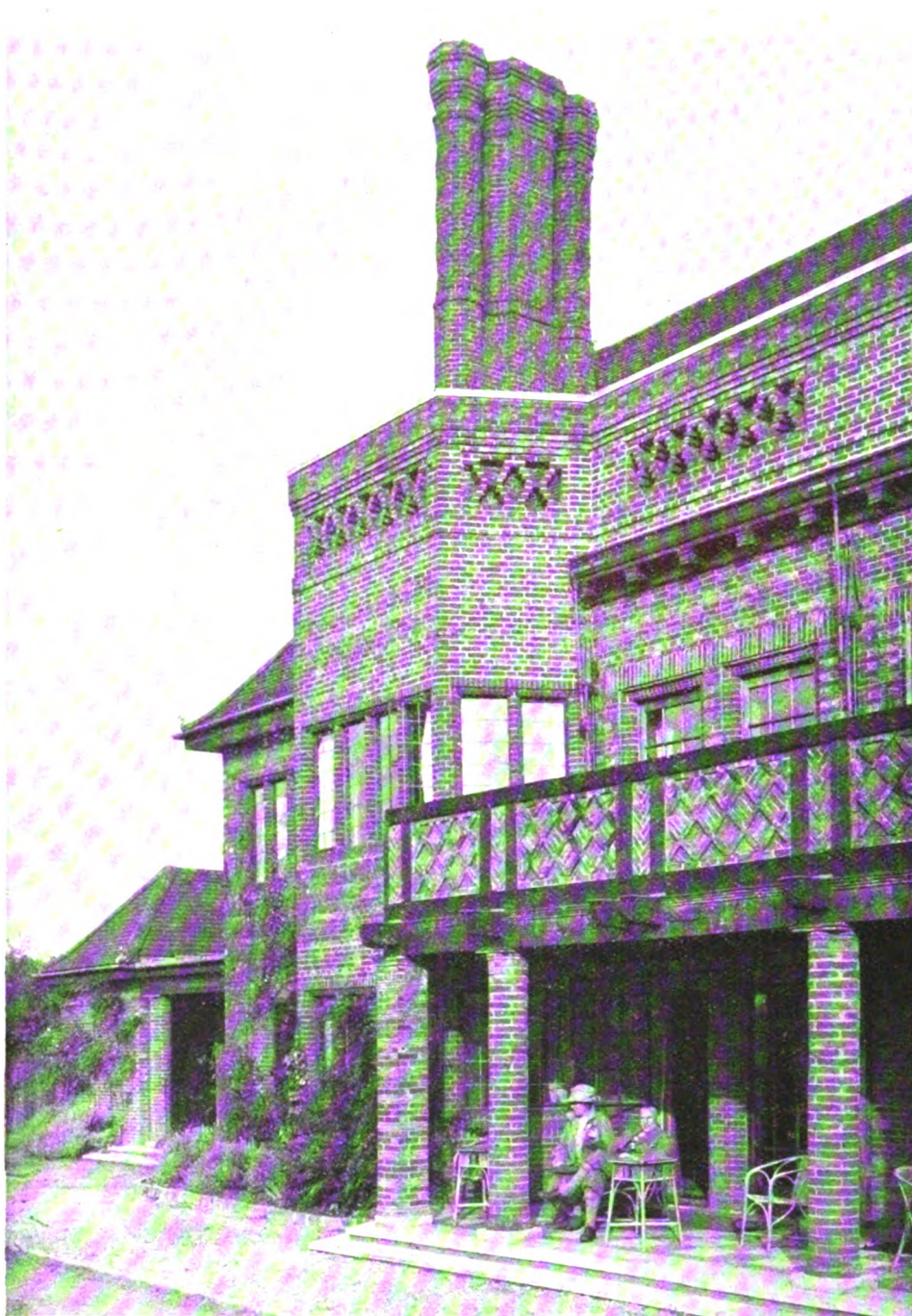
Albemarle Club are good examples of the work of Messrs. Smith and Brewer; while the new Port of London Building is shown by a collection of views, most of which we recently illustrated.

The most outstanding features of the exhibition are perhaps three excellent views of the Government Buildings at Pretoria, by Mr. Herbert Baker, whose work shows a masterly grasp of clear-cut effects of form and grouping, and is absolutely free from any desire to introduce unusual or "clever" elements in design. We feel, after an examination of the work shown, that the reconstruction of the Bank of England could have been placed in no better hands.

It would be both wearisome and unnecessary to comment on design after design, most of which are well known to us. The chief interest in such an exhibition is the general effect produced rather than that of a number of detailed ones, and the general impression given is that modern English architecture has the qualities of vigour and sanity which should augur well for the future, and that time and circumstances have produced a general phase of expression which is Renaissance in its character, while being distinctly less stylistic than the efforts of our immediate predecessors. We are too close to the times in which we live to be able to appraise either the faults or merits of our contemporaries quite justly, but the general impression remains that we are working on reasonable lines, and that time may be trusted to modify our tendencies where they are leading us astray.

It is inevitable that such an exhibition should be incomplete. It illustrates what busy men could send with convenience rather than what they might have sent, and, as is natural, most of us could mention many works which should be illustrated, but which are conspicuous by their absence.

Nearly all the work shown belongs to the years of plenty before the war rather than to the period of difficulty and high prices which has succeeded it, years which have rendered what were thought of as necessary commonplaces in building as expensive luxuries.



BEACONSFIELD GOLF CLUB.
STANLEY HAMP, Architect. (R.I.B.A. Exhibition.)

Our Illustrations.

COLONNADE, CHATEAU OF COMPIEGNE. Drawn by P. D. HEPWORTH, Architect.

PINELANDS GARDEN CITY, CAPE TOWN. A. J. THOMPSON, Architect.

Notes and Comments.

Thames Bridges.

The Bridge House Committee of the City Corporation is being assailed by many arguments to abandon the proposed St. Paul's Bridge and to use the funds at their disposal for the furtherance of the Charing Cross scheme. Whether the pressure brought to bear will be successful remains to be proved, but apparently there are reasons for believing that the reconstruction of Southwark Bridge has rendered St. Paul's Bridge unnecessary, and that statistics would prove from returns of traffic across Southwark Bridge that the proposed St. Paul's scheme is unnecessary. If the advocates of Charing Cross Bridge do achieve their object it will be

a most noteworthy victory, for they have carried on their campaign in the face of many difficulties, not the least being the determined opposition of the South Eastern Railway Company. Nothing that has happened for many years affecting London has aroused such widespread interest.

The Government and Housing.

The Solicitor-General has given a clear and explicit statement on the subject of housing which will be eminently satisfactory to the building trade. He said that the Government considered that the provision of housing could be best effected by private agencies and that they might possibly extend existing provisions whereby private builders

could borrow money for that purpose on reasonable terms. They would in addition contribute a sum not exceeding £200,000 a year for furthering the clearance of slum areas. There were something like 30,000 houses remaining from those included in former programmes which still had to be completed. It was satisfactory to note that some 25 authorities were undertaking to build houses and another 60 were discussing the advisability of doing so. Now that prices had fallen there seemed every chance of an early resumption of privately financed housing schemes.

As it has been emphasised before now that the cost of the average house can be put down at £350 or thereabouts, there seems little reason why the working classes could not pay an economic rent, or at least the margin between the economic rent and the possible rent is no longer a wide one. But we expect it will be long before a generation which expects to be spoon fed will realise that it is reasonable to pay for what they require for housing as for other commodities they need.

No. 1 Palace Green, Kensington.

The proposed demolition of 1 Palace Green, Kensington, a house designed by Philip Webb, has raised a good deal of controversy, and a protest signed by the Earl of Crawford and Balcarres, Messrs. G. K. Chesterton, A. Clutton Brock, John Drinkwater, W. R. Lethaby, J. W. Mackaill, Halsey Ricardo, J. C. Squire, Edward Warren and Sir Aston Webb, states that

"This house, a work of the late Philip Webb, the life-long friend of William Morris, was practically the first essay in the modern type of thoughtful and individual town house building, and is altogether a remarkable work of art. We hardly think it could be possible that it should be destroyed by consent of a public authority."

The secretary of the Commissioners of Woods and Forests, in an interview accorded to a *Times* reporter, said:

"The house, which was built about 1868, is, undoubtedly, a very genuine attempt at building in a satisfactory manner with some regard to architecture. It was built at a time when domestic architecture was at a very low ebb in London [he said], and this was a great effort to build in a better style. But the real crux of the thing is, was it a successful effort? The Commissioners of Woods and Forests are entrusted with the management of Crown lands for the purpose of getting revenue. Here is a modern house, and there is no doubt excellent work in it. The question whether it is a successful effort of British domestic architecture must, however, depend upon whether you can get anyone to take it as a private residence and to pay a fair rent for it. If the house cannot stand that test, is the nation bound to preserve it empty?"

"There are a number of very distinguished names attached to the letter which has been published in *The Times*. I should like to ask each of those gentlemen, 'Have you yourself been over this house? Are you speaking from hearsay or from an inspection of the outside of the house? Have you climbed the winding stone stairway, which is rather like the stairway in a medieval castle, and examined the house from bottom to top?'"

"The Commissioners are only the ground landlords. Messrs. John Barker and Co. have bought the lease, and have the house now. If they want to pull the house down they will have to come to the Commissioners to get consent. We have not given our consent, but the whole matter will come up for consideration if Messrs. Barker and Co. put forward a scheme for the demolition of the house. The house is not being used for business purposes. It has been cleared, and is ready for inspection by anybody, and I hope that the gentlemen who signed the letter to *The Times* will go over it."

"Perhaps the average Philistine would regard the house as being more than a little gloomy, but there is no doubt that it is interesting as an honest and sincere attempt in a period when there was little honest and sincere building. It would be a pity for it to be pulled down, and we are not going to allow it to be pulled down unless we are satisfied it is necessary. If those who are protesting against its demolition will produce anyone who is willing to take the house at a reasonable rent no doubt Messrs. Barker and Co. will rejoice."

"The Government is not in a position now to waste money. We are bound to get what revenue we possibly can, and the question here is, are you going to treat this house like an ancient monument? The best thing is to bring it down to pure business and to ask, 'What rent will you give for this house?' If the question were put to the late Philip Webb, 'Do you desire to be remembered by a house which is not in accord with modern

ordinary standards, and not suitable for private residence?' I wonder if the answer would not be, 'No, sweep it away, and put something better in its place.' The house was built in a benighted age. People's ideas were different fifty years ago. Modern domestic servants have very different ideas of work from those which were then current. Domestic servants to-day object to dark basements and sculleries, where you must have perpetual electric light, and to toiling up stairs built on the principle of a turret."

The question is an interesting and eternal one. We all advocate economy, but object to individual methods of securing it; we are all in favour of the retention of good past work, but differ in our appraisal of it. As to the merits of this particular house, which we have never been over, we cannot express a definite opinion, but we quote the greater part of the Commissioner's explanation as we think he propounds a point of view which is worthy of very full and careful consideration.

The Future of Crosby Hall.

In our issue of January 11, 1921, we illustrated a scheme prepared by Mr. Biddulph Pinchard for the utilization of Crosby Hall as the nucleus of an extensive scheme for the accommodation of American Colonial students in London. It was then proposed to carry out additions at a cost of some £200,000, but apparently this scheme, like many others, has fallen through. It now appears that the British Federation of University Students, of which Miss Caroline Spurgeon is President, have thoughts of making Crosby Hall the home of the Federation. They have been offered a 500 years' lease of the Hall and site for £10,000 by the University and City Association, whose funds only allow them to keep the buildings in a state of repair. At least £25,000 will be needed to acquire the Hall and build a wing for 40 residents on a self-supporting basis. The new scheme has been enthusiastically supported and welcomed by bodies of university women in other countries, and an endowment fund has been opened. The scheme is one which should be supported, and the modest size of which should render it easily practicable, whereas the former scheme we illustrated is so large that it is difficult to raise the necessary money, besides which the existing buildings may hardly be a sufficient nucleus for so extensive a proposal.

Competition News.

The Dewsbury War Memorial Committee invite designs not later than March 31, for a memorial to be erected in Crow Nest Park, Dewsbury. The assessor will be Professor C. H. Reilly. A copy of conditions of competition, together with plans of site, may be obtained on payment of one shilling, on application to Mr. H. Dearden, A.R.I.B.A., borough surveyor, Town Hall, Dewsbury.

The Castleford Hospital Committee offer a prize of 20 guineas for a design and approximate cost for a proposed hospital. The Committee will award the prize. Full particulars and plan of site can be obtained on payment of 2s. 6d., from Mr. P. D. Poskit, 175 Lower Oxford Street, Castleford.

The Housing Committee of Edinburgh Town Council have received the report of their Assessor, Mr. T. P. Warwick, on the competition open to architects in the city for designs for block dwellings in Grassmarket. First prize has been awarded to Messrs. Begg and Horne Campbell, second prize to Mr. T. Aikman Swan, and third prize to Messrs. Reid and Forbes. The blocks are three storeys in height above the present terraced level on the site of the old Jeffrey's brewery. There are six houses in each block, and the elevations are of a character suited to the locality. It is the intention of the Corporation to proceed with these houses forthwith as part of their scheme for providing new houses for the people dispossessed by the slum clearance operations in the Grassmarket and Cowgate area. The estimated cost per house is between £350 and £400. Each house is of two apartments with scullery.

The town of Mantes-sur-Seine invite schemes for the distribution of drinking water in their area. This competition, for which the prizes offered are 4,000, 3,000 and 2,000 francs, will close on February 28. The necessary documents may be obtained on application at the Mairie of Mantes and the despatch of 75 francs deposit.

The North-Eastern Railway Company are considering a scheme for the rebuilding of their station at Scarborough. An expenditure of £50,000 is thought to be probable.

The World of Art.

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The third annual exhibition of the Society of Wood Engravers is now being held, as in previous years, at the Chenil Gallery, Chelsea, and it is interesting to note how—in these successive exhibitions, which I have always noticed fully in these columns—this revival of one of the oldest of our graphic arts is progressing. I consider that in the present display we have every reason to be satisfied; without any very new or striking features the work here shown by John T. Greenwood, Sydney Lee, Frank Medworth, Gordon Craig, Gwendolen Raverat, Ludovic Rodo and John and Paul Nash is on the best level of previous years, and in some cases of very remarkable merit.

It has been said of this woodcutting art, by Mr. Campbell Dodgson in the introduction to the first of these annual exhibitions, that woodcutting, of which wood engraving, in the strict sense of the word, is a comparatively modern offshoot, is by far the oldest of the processes of engraving. The tools, material and process are just what they have been for centuries; it is only the artists who are different. "They may study," said this writer, "with advantage the masterpieces of the past, for wood engraving in Europe has a glorious record, but we shall not, if we are wise, exact from them imitation. Let them be frankly of their own time, and develop a modern style. . . . It is for the modern wood engraver to convince the public that a woodcut looks as well on a wall as an etching, if not better. He should not find it difficult." Admitting that the wood-graver has here to face a very formidable rival—as we shall see later in this very notice, when I go on to speak of the work of modern Masters of etching—it seems to me that this art has its own peculiar qualities and attractions, perhaps, too, its own defects, but which place it apart in its own special field. Among these are surely the richness and strength of the graven line and the effective massing of blacks. I can imagine no other technical medium giving quite the result obtained here in Frank C. Medworth's magnificent "Deposition," with its strong drawing and fine grouping, or, to take an entirely different theme, but most telling in its handling of the blacks, in E. Leigh-Pemberton's "The Toad."

Mr. Gordon Craig has a certain "macabre" feeling, which is his own, and finds expression here in his "Two Ghosts" and "The Hour Glass"; and in landscape and buildings John Greenwood, in his "Cove Lane" and his finely handled "Arnccliffe Mill"; John Nash in his "Gloucestershire Cottage"; Gwendolen Raverat's "Street by Moonlight"; and Charles W. Taylor's "Conway Castle" are to be specially noted. In portrait and figure work we find Ludovic Rodo's head and shoulders of Mr. G. Bernard Shaw, whom, as my readers will have noticed, we have seen a good deal of in the Galleries this autumn; Noel Rooke, in "The Gate," shows a girl seated, with telling use of black and white; and Gwendolen Raverat, whose grandly designed woodcut of "The Bathers" appeared in 1920, has here a clever little subject engraving of "David old," in which a young woman—presumably Abishag the Shunamite, and not looking very pleased with the transaction—is being introduced to the aged monarch by another woman. It may be questioned whether wood engraving lends itself to very modernist treatment. In the "Black Poplar Pond," by Paul Nash, the nude figure lying in the foreground seems to be the only quiet object, behind whom the trees, which we are told are poplars, seem to be executing a kind of war dance; the figure work by John Nash here should be noticed in his "Figures by a Stream" and Vignette.

The seventh exhibition at the Leicester Galleries of "Modern Masters of Etching" is a very notable display, and, taken altogether, the best that has been given. In the last, if I remember right, special attention was very properly bestowed on the work of Anders Zorn; this year there is no such special claim, and the distinctive note of the exhibition is its breadth and variety, ranging from Francisco Goya's terrible "Love and Death," out of the series of "Los Caprichos," to the latest creations of Nevinson or Ethelbert

White. Perhaps even pre-dating the tragic Goya scene is the delightful Paul Sandby landscape of "The Brook"; and near this last we find some admirable work of that fine etcher, Meryon, whose portrait, "Meryon a mi-corps," is given by F. Bracquemond, as well as an even more interesting half-length of E. de Goncourt. In architectural subjects—"La Tour de l'Horloge" and others—Meryon is always fine; and the same may be said of Lepère, though to my mind, in his "Cathédrale de Rheims," the delicate Gothic detail tends to overpower the whole design, and the light and shade is happier in his "Cathédrale d'Amiens." In this class of subject may be noted D. Y. Cameron's "Tewkesbury Abbey," Albany Howarth's "Rochester," and a remarkable etching by Celestini of "Civita di Baqueria"; while Walter Sickert's interior of "The New Bedford" has almost the softness of a drawing or lithograph.

Walker's Galleries are now showing the work of the "Seven and Five" Society, which, I gather, consisted originally of seven painters and five sculptors. The latter in the present display seem to be reduced to three, while the painters, conversely, have expanded. Norman Janes has some good watercolours, and among the exhibitors are Harry Morley, Roy Gill, and one lady, Miss Attenborough. In the next room W. H. Walker has his annual show of watercolours of fancy scenes, often very charming—"In varying moods." The memorial exhibition here of the work of the late Lawrence Phillips, a fine etcher as well as a painter and mechanic, I shall reserve to next week.

In my series of notices in these columns of "Copyright in Art," I was careful not to commit myself to any statement as to Ireland in the then conditions of that country. The matter has since come to a head in the discussion on the Free State Constitution Bill, when Mr. Hogg stated that the Copyright Act of 1911 applied to the whole Empire, with the exception of those self-governing Dominions which had refused to adopt it. *The Times* Parliamentary correspondent, commenting on the Attorney-General's statement, points out that the Irish Parliament will have the option of adopting the British copyright laws, as certain of the Dominions have already done, and adds that "if Ireland does so there will be no difficulties, but if she does not the possibilities of piratical publication of English literature will be endless." S. B.

Water-Colours at Bethnal Green Museum.

In 1885, Mr. Joshua Dixon, a successful cotton merchant and a judicious collector of pictures, bequeathed to the Bethnal Green Museum the whole of the paintings in his house, Winslade Park, near Exeter, for the benefit of the public of East London, where he was born in 1810. Half of this bequest consisted of very carefully chosen water-colours by artists of the British School. As a part of the process of re-organisation which the Bethnal Green Museum is at present undergoing, these water-colours have now been re-arranged and are exhibited in the Central Hall, where they are given a prominence they thoroughly deserve. They comprise notable works by some of the most eminent among the founders of the School, including fine examples by John Varley, John Glover, George Barret, jun., William Hunt, Turner of Oxford, Peter De Wint, David Cox and Copley Fielding. The middle period of the School is represented by such men as Blake's friend Samuel Palmer, F. O. Finch, Louis Haghe, W. L. Leitch and Birket Foster; while the collection is also rich in water-colours by artists who were working during the period at which Mr. Dixon was collecting. Among these we can instance the work of George Wolfe, Henry Brittan Willis, Robert Thorne Waite Alfred Powell and Charles Davidson, who are represented by excellent drawings.

The public of East London has never been given a better opportunity of realising what a wealth of beauty has been produced by the water-colour artists of the British School. All who are interested in art should visit the Museum and see these drawings. It is to be noted that inducements to study have been considered in the new arrangements, and seats have been placed conveniently at intervals about the gallery so that the visitor can sit and enjoy the exhibits with the same comfort one expects to have when reading a book.

The Museum is open free from 10 a.m. to 5 p.m. on weekdays, and from 2.30 to 6 p.m. on Sundays.

Modern Methods in Building Construction.—XXXVIII.

By Albert Lakeman, M.S.A., M.C.I.

FLOOR CONSTRUCTION—(continued).

Several of the patent systems used in floor construction are based on the use of hollow tiles or blocks, which reduce the dead weight by allowing the minimum amount of concrete to be adopted. These floors have been extensively employed in modern work, and they can be adapted to nearly all types of building by the use of reinforcement in one or both directions and a variation in the spacing of the tiles and the amount of concrete cover provided.

A well-known system is the Kleine, which has been used in many large buildings. This type is composed of hollow porous brick or terra-cotta blocks with closed ends arranged a sufficient distance apart to permit the placing of steel reinforcing rods in the joints, which are afterwards filled in with concrete. A layer of concrete is also laid over the top of the blocks to provide the compressional resistance and enable the floor finish to be applied to a solid base. The blocks are temporarily supported on planking, and in turn constitute what may be described as permanent forms for the actual concrete. In the case of floors reinforced in one direction only, the blocks are butted close together in one direction to give a continuous line of blocks, and the space for the reinforcement is provided between each line to form a series of reinforced concrete ribs across one span. When reinforcement in both directions is necessary all the blocks are spaced some distance apart to provide a series of isolated blocks which allow the rods to run in both directions and give two sets of reinforced ribs, intersecting each other at the corners of the blocks and running across the two spans. In this type of floor the blocks or tiles act principally as forms for the concrete and insulators as regards heat and sound, but they do not contribute in any real degree to the strength of the construction. The load-carrying portions consist of the series of ribs which are reinforced, and the concrete cover over the tiles and these two portions when combined form a series of small tee beams, and the top flange resists the compression, while the reinforcement on the rib takes the tension. This type of floor is therefore based on scientific principles, and is a fair indication of the development that has taken place in modern work in the endeavour to reduce the dead load to be carried by concentrating all the material required for strength in those positions where it can be stressed up to a value which approaches very near to the safe working stress. The advantages claimed for this floor are that it is economical, quickly constructed, elaborate formwork is avoided, and it can be adapted to long spans.

There are several patent flooring systems where terra-cotta blocks or tubes are employed, and the majority are designed more or less on the same principles, but in many the whole of the under surface is formed with the blocks and the concrete filling is provided over the top only. This type is, of course, not applicable to long spans, owing to the absence of reinforcement on the lower surface, and they are usually applied to the panels between steel joists, which are placed fairly close together as in the original type of floor composed of steel joists and plain concrete only. In some cases the floor construction is made up with pre-cast reinforced concrete beams, with the space between filled in with light concrete tubes as in the armoured tubular floor; and this can be assembled without the use of shuttering and when in position forms a platform which is strong enough for the workmen to place the top layer of concrete, which is deposited over the whole area to knit the units together.

In the Mouchel-Hennebique tubular floor hollow concrete tubes with splayed sides are adopted, these being laid in rows on planks supported by light uprights, with a space on either side of each row which is subsequently filled in with reinforcing rods and concrete to give a series of weight-carrying ribs connected to the layer of concrete which is deposited over the tops of the tubes to form a level surface. The tops of the tubes are of arch form to give the maximum strength under compression with the minimum material, and they are usually made about 20 inches wide by 7 inches

high in lengths of 24 inches, and are thus units which can be easily handled.

Many of the patent flooring systems available at the present time possess considerable merit, but it is necessary to sound a note of warning with regard to some of the systems that are being offered, owing to the fact that they are deficient in strength when called upon to carry the specified load, and some judgment and experience are necessary in making a selection of the type to be adopted. There has been a great tendency, owing to competition, to cut down the dead weight of the floor and the reinforcement to a level inconsistent with practical requirements, and this has led to deflection and sometimes failure under loading which is even a fraction over the specified superimposed load indicating that the factor of safety has not been maintained. Some of these floors are described in glowing terms, and look extremely scientific to one who is not an expert, while a cheap price per yard super is put forward and the patentees will undertake to execute the work themselves as sub-contractors under the main contract. The price quoted has been driven down by competition to such a low level that inferior materials have to be employed to avoid sustaining a loss, and the result is a floor of weak design badly executed.

This warning may seem a little strong, but the author had to deal with one case where in a modern building, in the West End of London, the floors, which were of a patent type, deflected under their own weight before the application of any load, and they were quite unsuitable for the building, where the specified safe load was 160 lbs. per foot super. In another instance, also in London, a small fire occurred when the shell of the building was completed and before the floor finishings were laid, and the floor construction itself commenced to burn away although classified as being "fireproof." In this case it was found that the aggregate, described by the flooring patentee and contractor as breeze, for lightness was composed in the chief part of coal dust and pieces of unburnt coal. Owing to the low price that had been quoted, any rubbish was used in the construction in order to save the expense of good material. Firms of repute will not, of course, design or execute work on these lines, and the architect who is considering the adoption of a patent flooring system will therefore be wise in selecting a type which is the product of a reliable firm and has stood the test of application to many structures.

The construction and finish of the ground floor of a large building offers several possibilities, and it is an important feature both from the economical and suitability point of view. Generally speaking, the floor can be divided into two parts—viz., (1) the base and (2) the surfacing; and while the former is practically always executed in concrete, the latter may be selected from a number of materials, which include granolithic, wood block, hardwood, deal boarding, tile, marble, artificial stone slabs, linoleum, bituminous material, and patent compositions. Several of the methods adopted have been in use for many years and cannot be properly described as modern developments, although they are still extensively employed. It has been found in the past that several types of flooring possess a particular weakness in some respect which causes considerable trouble after the material has been in use for some time, and efforts have been made in modern work to overcome this weakness by a variation in the application of the material rather than abandon its use entirely. As an example, granolithic flooring is extremely liable to crack and separate from the base, while otherwise excellent for many purposes; deal flooring is frequently subject to dry rot; bitumastic materials become soft and are destroyed by certain spirits used in manufacturing operations of a character requiring the use of a solvent, and so on with other materials. Granolithic flooring is a typical example of the disadvantage of having a surfacing material which is applied directly to the base, but is not part of the latter. It is true that specifications usually state that the granolithic surface is to be laid while the concrete is green in

order to get the maximum adhesion and, if possible, make surface and base one homogeneous mass; but the condition is seldom attained in practice, owing to the fact that the granolithic work will seldom proceed at the same speed as the concreting operations, and the base in many parts of the flooring will become hard before the surface is applied. In order to overcome this difficulty, in American work it is a common practice to use a hard aggregate broken fairly small, and work up a good surface on the concrete itself. This is essentially a modern method, and it results in three distinct advantages—viz., (a) a considerable saving in cost is achieved; (b) the work can be executed more speedily, and (c) there is no possibility of the surface becoming disintegrated by lifting from the base. The method adopted can be briefly described in the following manner. The concrete of the required thickness is laid in the ordinary way and is screeded off to the necessary level by the use of a long straightedge travelling on temporary battens or guides. Immediately the screeding is done the battens are removed and a little fine concrete is deposited on the line of the battens to fill any voids created. The floor finishers then commence the surface treatment at the point where the first batch of concrete was placed and work backwards behind the concrete-laying gang. The newly laid concrete is naturally very soft and wet on the surface, and the finishers scatter a small quantity of neat cement on the top to take up the superfluous moisture and render the concrete in a condition to be smoothed over with a wooden hand float. This float takes out the lines and marks left by the rough screeding with the straightedge, and forms a fairly good surface, while it has the effect of carrying the neat cement slightly down into the concrete and incorporates it in the upper part of the mass before the initial set takes place in the latter. The finishers wear rubber boots and walk on the plastic concrete itself, but by working backwards they are able to cover up their tracks as they go and leave the floor worked over as a levelled concrete layer, levelled and floated with reasonable accuracy, free from all screeds, battens or other temporary arrangements that cause patches when subsequent removal becomes necessary. This first stage of the finishing can be proceeded with rapidly, and there is no difficulty in keeping pace with the concrete laying, a reasonable working margin only being required between the two operations. After the first stage of finishing with the wooden float has been executed the floor is allowed to remain until the final set is about to take place and the concrete has developed sufficient hardness to stand the weight of a workman, provided he is supported on a short length of boarding. This piece of board is about 2 feet 6 inches long by 10 inches wide, and on it are fixed two upright pieces about 6 inches high, one at each end, to form a fixing for some stout canvas which is stretched across the top to form a small hammock type of stool upon which a workman can kneel without discomfort. The final finishing is then accomplished by the floor finishers, who iron the whole surface by polishing it vigorously with an ordinary plasterer's steel hand float to remove any slight roughness left by the wooden floats and endow the concrete with a dense surface which will possess good wearing properties. By the use of the special kneeling boards the workers can traverse the whole area of the floor without leaving any impression behind. After this treatment the surface can with advantage be covered by a layer of damp sawdust, which will prevent too rapid drying and form a temporary protection should work be proceeding overhead.

It is extremely important to execute the final polishing with the steel float at the right time, as if this is executed before the concrete has "gone off" sufficiently it will be impossible to iron the surface effectively to give the maximum density, as it will be too soft and plastic; while if it is left too long the concrete will become too hard to respond to the treatment, and a smooth surface can only be obtained by rubbing in some additional cement mixed with a little water to give a smooth skin, which is useless for wearing purposes, as it will dust up or break away under traffic, owing to the fact that it will not be properly incorporated in the mass.

The author has successfully adopted this method when executing work in this country, the only obstacle being the prejudice that exists among many workmen who are too conservative to readily acquire the art of applying material in a manner which differs from that generally practised. An experienced granolithic layer will view this float-finished concrete with suspicion at the outset, and owing to lack of sympathy with the idea will make little effort to do the work with the skill that is used in his grano work; but with a little patience and guidance it will be found that the new method will prove itself worthy of extensive adoption, and the saving in time and expense, together with the elimination of loose surface work, is so apparent that its use will be continued by anyone who has once given it a fair trial.

With regard to the method of laying ordinary granolithic, this is so generally well known that no special notes or description are necessary. This material has been in use for many years, and there have been no developments in modern work as regards its method of application.

The use of linoleum as a material for floor surfacing may be considered by many as a part of the furnishing, but it is not so intended here. It is quite possible to save the cost of producing a good hard-wearing surface when it is known that the building will be used as business premises, offices, or any similar purpose which does not require a very hard surface, owing to the traffic being of a comparatively light nature; and as the permanent surface provided in the erection of the structure will be covered by a carpet or linoleum before occupation where usage for offices, etc., is contemplated, the finishing can be executed by laying suitable linoleum in the first instance. This method has been successfully adopted in several buildings by giving the concrete floor a rough screeding of Portland cement and sand only to provide a suitable bed for the linoleum, which is pasted down by the contractor when the rendering has become thoroughly hard. The linoleum used should be that known as "Battleship" quality, having a thickness of about one-quarter of an inch. The building owner by this method obtains a finished surface that can be used without further treatment, and even when the building is erected for letting purposes it will always appeal to a possible tenant as being a floor upon which he will not be called upon to put a covering, and therefore becomes an inducement to take the premises.

This floor surfacing has the advantage that it can be quickly renewed at any time without the use of materials creating dirt and dust which follow the repair of granolithic or similar materials. Its use should, of course, be limited to the particular type of building for which it is suitable, as it cannot be advocated for warehouses, factories or large public halls.

Artificial stone slabs will not generally be adopted for permanent flooring, as they are comparatively expensive and possess several disadvantages, among which are their large number of joints; they are cold to the feet, and the slabs are liable to become cracked under considerable truck traffic. Slabs are excellent, however, to employ in a building which is erected as a warehouse or similar type in connection with an industry that may require additional manufacturing space in the future, as the use of a permanent floor may prove a great disadvantage should it be desired to convert the warehouse into a shop wherein machinery has to be installed. A method sometimes adopted with this class of building is to prepare a bed for the flooring material by laying 6 inches of ashes over the whole surface, and well consolidate these by rolling to the required level. Directly on to these ashes artificial stone slabs from 2 to 3 inches thick are laid by bedding each slab on a little lime mortar at each corner and in the centre. When the slabs are laid some weak liquid grout is swept over the surface to fill up the joints, and the floor is ready for use.

If at a later date it is necessary to convert the building into a shop and instal machinery foundations, there will be no expensive cutting away of concrete, but the slabs can be lifted, foundations can be executed, and the permanent floor can be laid down. The slabs taken up can be

cleaned and reused indefinitely if they have not been subjected to severe wear which has caused breakages, and thus there is no waste of good material.

A temporary floor laid in this manner will last many years, and the use of the ash under-layer will result in keeping it reasonably dry.

(To be continued.)

PART I.—I. Introduction, Steam shovels, Jan. 13; II. Steam shovels, Trench diggers, Jan. 20; III. Grab buckets, scrapers, Jan. 27; IV. Drag-line excavators, Feb. 3; V. Derricks and cranes, radial loader, paving-breakers, Feb. 17; VI. Surplus Soil Transport (Hand Labour), Feb. 24; VII. Surplus Soil Transport (Horse-drawn wagons, Steam-driven wagons), Mar. 3; VIII. Surplus Soil Transport (Steam-driven wagons), Mar. 10; IX. Surplus Soil Transport (Steam-driven wagons, Petrol wagons, Narrow-gauge track with wagons), Mar. 17; X. Surplus Soil Transport (Narrow-gauge track with wagons, Trucks on Standard-gauge track, Electrically-driven trucks and vehicles), Mar. 24.

PART II.—XI. Foundation Work (Ordinary soils, Soft soils), April 7; XII. Foundation Work (Soft soils), April 17; XIII. Foundation Work (Soft soils), April 21; XIV. Foundation Work (Soft soils), April 28; XV. Foundation Work (Soft soils), sheet piling, May 5; XVI. Foundation Work (Soft soils), steel-sheet piling, May 12; XVII. Foundation Work (soft soils), steel-sheet piling, pumping, May 19; XVIII. Foundation Work (Soft soils), pumping, May 26; XIX. Foundation Work (soft soils), foundation piles, June 2; XX. Foundation Work (soft soils), foundation piles (cont.), June 9; XXI. Foundation Work (soft soils), foundation piles (cont.), June 16; XXII. Foundation Work (soft soils), Waterproofing, June 23; XXIII. Foundation Work (soft soils), Waterproofing (cont.), June 30; XXIV. Waterproofing (cont.), July 7; XXV. Water Supply, July 14; XXVI. Concreting, July 28; XXVII. Concreting (cont.), August 4; XXVIII. Concreting (cont.), August 11; XXIX. Concreting (cont.), Aug. 18; XXX. Concreting (cont.), Aug. 25; XXXI. Form Work, Sept. 1; XXXII. Form Work (cont.), Sept. 8; XXXIII. Brickwork, Sept. 22; XXXIV. Superstructure Frame, Sept. 29; XXXV. Superstructure Frame (cont.), Oct. 6; XXXVI. Steelwork Erection (cont.), Oct. 13; XXXVII. Floor Construction, Oct. 20.

"The Architect" Fifty Years Ago.

DECEMBER 7, 1872.

COMPETITION DECIDED.

In July last the directors of the Stockton Exchange Company publicly advertised for designs, but eventually the competition was limited to local architects. About eight sets of drawings were submitted from which three were chosen, bearing respectively the mottoes "Nota Bene," "Art and Commerce," and "Practice." In consequence of the lack of funds none of the designs could be carried out, and the authors thereof were invited to prepare other plans in competition to suit a reduced site. Messrs. Alexander & Henman and Mr. C. J. Adams responded to the call, and the result is that Messrs. Alexander & Henman, of Stockton and Middlesbrough, have been appointed to carry out the buildings, and a premium of £50 has been awarded to Mr. C. J. Adams. The selected designs comprise an Exchange Hall, which can also be used for public meetings and entertainments, and capable of comfortably seating 1,700 persons, retiring-rooms and cloak-rooms being provided, twenty-two business offices and club buildings, with reading, billiard, letter-writing, coffee, and smoke rooms, and kitchen, &c. The site is a long and somewhat narrow one, with an entrance to the High Street of only 14 feet. According to the original scheme the frontage was to have been about 68 feet, and consequently allowed of a much more imposing façade to the High Street. The cost of the buildings is to be £9,000, and it is expected that they will be commenced forthwith.

Major Boyd-Carpenter, M.P., Parliamentary Secretary to the Ministry of Labour, stated in the House of Commons last week that 145,771 houses had been completed by local authorities and public utility societies on November 1, and 39,145 houses had been completed at that date by private builders under the Housing (Additional Powers) Act, 1919, making a total of 184,916 houses completed. In addition, 3,056 dwellings had been provided by the conversion of huts and hostels, and 30,229 houses remained to be completed. Of these 18,847 were in course of construction on November 1 by local authorities and public utility societies. It is estimated that the commitments under the assisted housing schemes, including slum clearances, will amount to £9,900,000 per annum, of which £9,100,000 per annum will be borne by the Exchequer.



SEAFORD HOUSE (LORD HOWARD DE WALDEN),
37, BELGRAVE SQUARE

A London Contrast.

London is a place of eloquent contrasts. The magnificences exist cheek by jowl with the squalor and trivialities. Piccadilly and Curzon Street have as a neighbour the queer little area of Shepherd's Market, where the shops of dealers in small wares oddly assort with that vicinity of great clubs and imposing mansions.

There cannot be a more piquant contrast, however, than that between the great town residence of Lord Howard de Walden, Seaford House, 37, Belgrave Square, and the humble houses at the rear of it. Seaford House stands at the corner of Chapel Street, out of which runs Chapel Mews, and there stands the little "Horse and Groom" public-house, looking like a doll's-house beside the great mansions. Further at the rear are the backs of other houses, with the usual gruesome London skyline of chimney-pots and tallboys.

This is that region of "Belgravia," which is by no means to be confused with "Pimlico," although both are portions of one estate (the one-time Ebury Farm). No one confesses to living in Pimlico; while many would be proud of an address in Belgravia; which, by the way, is the subject of Sir William S. Gilbert's lines in *Iolanthe*, satirising political thoughts that still seethe in Labour circles:—

"Hearts just as pure and fair,
Can bloom in Belgrave Square,
As in the lowly air of Seven Dials."

It is a curious and a startling thing to recall the historical fact that when Buckingham Palace was originally purchased for George the Third, and when that monarch, wise beyond his usual level, foresaw that Society would go West from St. James, with the Court, he suggested that this property, then all fields, should be purchased as well; and was refused. Grenville, Prime Minister at the time, would not sanction the cost—£20,000, and thus what would have been for the Crown a splendid bargain, was lost.

The property remains in the hands of the Grosvenor family, at whose head is the Duke of Westminster, and the name of the region derives, in fact, from Belgrave in Leicestershire, a Grosvenor possession.

It was in 1767 that Grosvenor Place was first built, but Belgrave Square and its surroundings did not take shape until 1826. Then arose the firm of Cubitt & Smith, who raised the then marshy fields with the spoil brought from the excavation of St. Katherine's Docks by the Tower, and built in the fashion set some years earlier by Nash in Regent Street. Thus it is that "Stuccovia" has ever been an alternative for "Belgravia."

Belgrave Square, it is thus seen, is not quite a hundred years old. It is one of the longest of the London squares, measuring 634 feet by 637 feet, and was designed by George Basevi, whose own residence was No. 31. His name still appears over the portico.

Most of the surrounding streets and thoroughfares bear names identifying them with the Grosvenor's and their country properties: Eaton Square, Grosvenor Crescent, Halkin Street, Wilton Place, Eccleston Square, High Street, Lupus Street, and Motcombe Street, among others.

Garden Design.

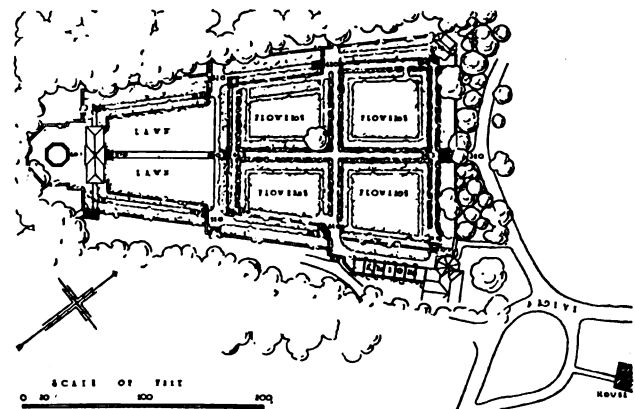
By Edward Clark Whiting

(OF OLNSTED BROTHERS, LANDSCAPE ARCHITECTS).

Garden design is governed by the same general principles and accepted tenets of composition that apply to every fine art. There must be symmetry or balance; there must be unity; there must be harmony of lines, forms and colours; there may be rhythm; there should be variety, but, unlike the tapestry on the museum wall or the "landscape" of Corot, a garden is never a fixed or completed work of art, and it is seldom entirely under the control of the designer. The sun, the clouds, the sky, the enclosing woods and the distant landscape are inevitably parts of the garden composition; living materials, such as flowers, shrubs and trees, are the chief mediums of the designer's work—and these are changing from hour to hour, from day to day, from year to year. The garden designer must understand these living qualities of his materials, and he must appreciate the influence of those larger and perhaps more dominating elements of site and environment over which he has comparatively little control, for it is in both these sorts of conditions that are found the peculiar opportunities of the art.

Financial or other arbitrary restrictions affect the quantity rather than the quality of the work; use and custom are obvious requirements which hardly need elucidation, but the influence of environment is so subtle and varying in the manner and degree of its control that it will bear analysis. For convenience it may be divided into two fields—the architectural or stylistic influence usually established by the house, and the influences emanating from the conditions of the site.

If the garden is close to the house, if it is definitely and organically and visibly related to the house, there should be an evident



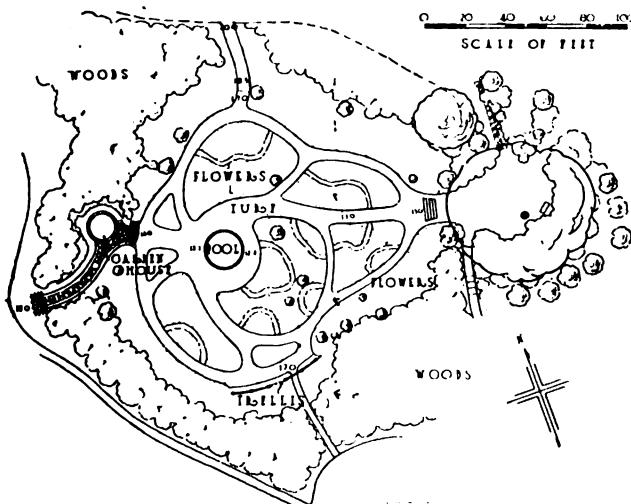
Plan of a Garden at Cold Spring Harbor

relative importance of dominance of the house and of such other influences as may be present. There are few cases, however, where it is not worth while to secure some degree of harmony by the use of like or similar elements in the design of both house and garden to bind them in sympathetic relations.

The most frequent, most varied, and usually the most dominating influences in garden design are those of the site. Limitations of a sort, they are at the same time opportunities. They are the opportunities which more than anything else make for the individuality of gardens. Indeed, that garden is very rare which does not show in some degree the influence of the particular place in which it is built.

But what are those conditions of a site which may control or influence a garden? In the first place, the available area is often limited in both size and shape, and the garden must be cut to fit. Then there are the ground forms—a flat meadow, a sloping hillside, a rounding hill-top, a valley of gentle slopes or with steep floor and precipitous sides—different in each and every case. Then there are the backgrounds and enclosures—open hillsides, dignified woods of pine or the lighter woods of deciduous growth, individual trees or groups of trees, cliffs, established walls or buildings; in fact, any established conditions around the site which must or which may remain to take their parts in the garden scenes. Within the site there may be trees fully grown and of distinctive character; there may be dignified old box plants and hedges; there may be other elements of marked character and association which can be utilised in the garden scheme. Then there are the views of distant landscape, and finally there are the lights and shadows and the subtle atmosphere of established character.

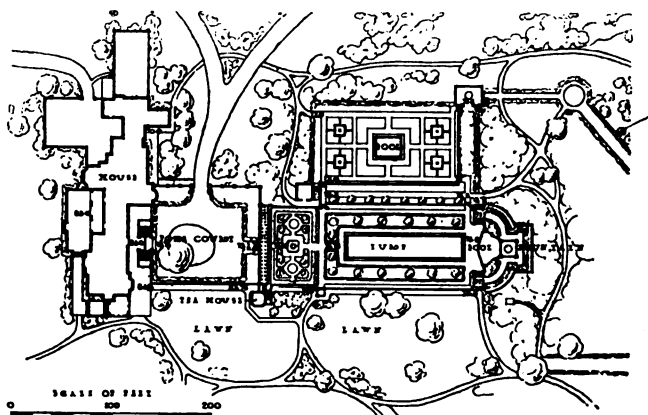
In what manner and to what extent a garden should be influenced by these conditions of the site can hardly be prescribed, but may better be suggested by specific examples. A garden at Brookline for H. G. Lapham is an interesting combination of influences; the architectural details were clearly dictated by the style of the house (Elizabethan), whereas the size and shape of the garden were quite definitely limited by the area available and by the unusually fine trees about it. Impressive as a background, these trees by their size and character clearly dominated the scene, and to avoid conflicts of scale and confusion of interests the flowers, in their intricate details of colours and textures, were placed at either side, while the whole central



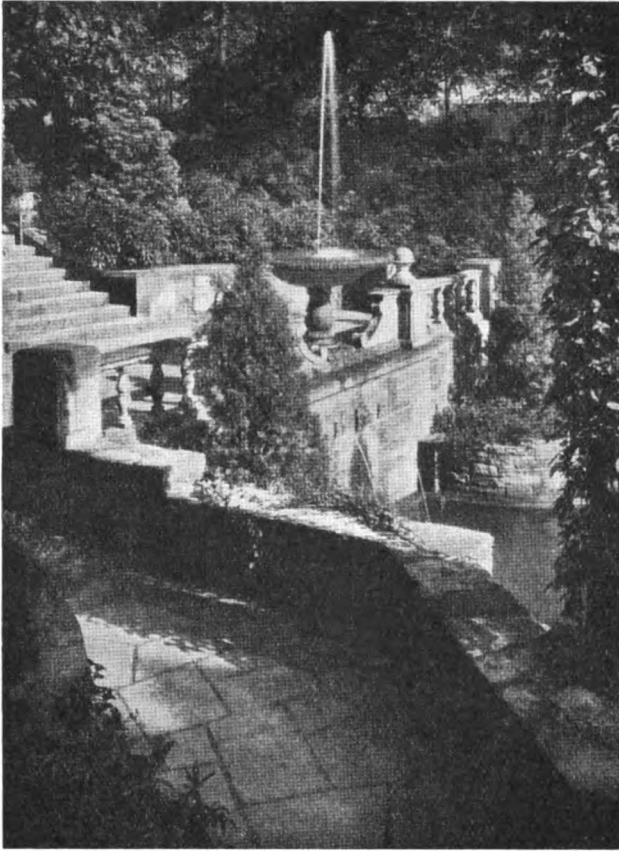
A Free, Informal Garden Plan Suggested Entirely by Environment

harmony between the two—a harmony of line, form, material and colour. And if the house is of a distinctive, well-recognised style, the garden should reflect the same historic or geographic precedents. It must be remembered, however, that in the gardens of all times and all places the distinctive style or character has been determined primarily by social habits and customs, by the local conditions of site and by the special plant materials available. And it is for this reason that exotic garden precedents can be followed *only* in so far as they are capable of adaptation to the new conditions of climate, site and social customs. Plant forms and garden ornaments of clearly appropriate character, and the use in both garden and house of architectural details of the same period, together with a certain similarity or sympathy in the units and the scale of the designs, are generally sufficient to produce the desired harmony of style or of association. Even under the most exacting conditions of architectural influence, the requirements of style are not very restricting. Properly understood, they become little more than a unifying element in the garden design.

The less pronounced the style of the house, the smaller will be its influence upon the style of the garden. Also the less definite and organic the tie between the house and garden, and the more obscure the visible relation between the two, the less influence will the one exert upon the design of the other. But even in the most extreme case of disassociation, a well-recognised and pronounced style in the house should be reflected to some extent in the distinctive features of the garden. The importance of this stylistic influence and the extent to which it should be recognised in garden design must in the end depend upon the



Plan of Garden of J. E. Aldred. House of English Tudor Style



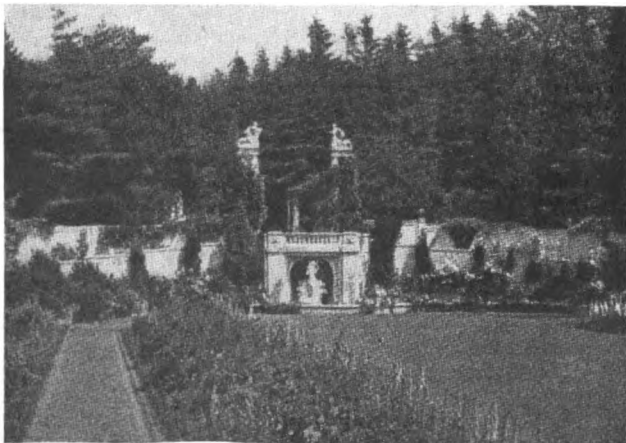
RAVINE GARDEN.

element of the picture from the house was kept in simple surfaces of turf and water, a foreground for the trees.

In the ravine garden the relation to the house is obscure, but the house is not far away, and its pronounced style—old English Gothic—is reflected in the garden details. The site was a narrow gulch in the edge of the woods and extended from the lawn at the upper end to a terraced vegetable garden at the lower. The straightness of the ravine, a distant glimpse it provided across the city, and the fact that it was in a sense a "way" from one part of the grounds to another, suggested a defined axial treatment. The garden is essentially an elaboration of the axis, and needs no other control to give it unity. It melts gradually into the informality of the wooded banks that frame the picture. Water, sunlight and the ever-changing shadows from overhanging trees give it life and atmosphere.

In the garden at Ipswich the strength and dignity of the surrounding woods dictated the simple lines and forms of the garden, and a restrained but well-considered use of architectural accents and a careful selection of plant forms have given it distinctive character and interest.

In the garden at Cold Spring Harbour the old box hedges of a former garden determined the main axis and cross walks—in fact, became the key to the new design. The garden outline and the arrangement of terrace planes were suggested by the form and slope of the valley. Strong enclosing walls give adequate unity to an unconventional and rather free design. A garden planned wholly in response to the topography, the enclosures and the



GARDEN AT IPSWICH, MASS.

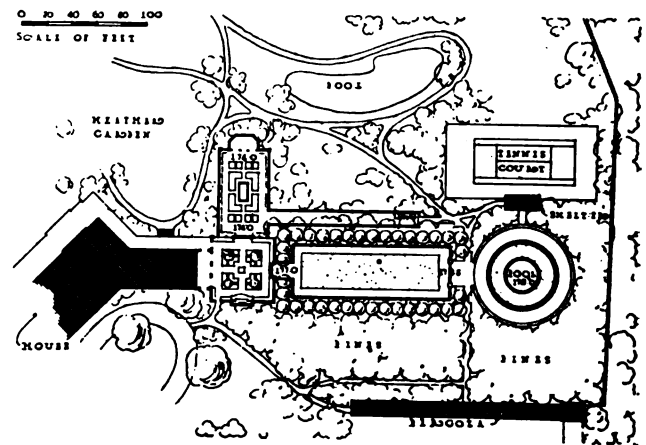
subtle atmosphere of established character, it has distinct individuality and the beauty of fitness.

Every set of conditions presents a different problem, and, after all, they are problems to be solved in each case by the garden designer according to the light of his personal perceptions and genius. If the site is flat and devoid of striking features, its influence is clearly passive and subordinate, but by its very lack of positive guidance it seems to suggest the more straightforward and balanced design and perhaps the more formal interrelation between house and garden. On the other hand, if the site is a steep ravine, plunging down between protruding cliffs and framed with picturesque woods, its influence on the garden is absolutely dominating. Between these extremes are infinite variations in the character and degree of influence exerted by the site. It is safe to say that the garden which shows no recognition of its environment lacks some element of harmony and fitness; it may even lack that subtle quality which distinguishes the real work of art from the commonplace, for it is among those gardens conceived and built with a full and sympathetic appreciation of the "genius" of the place that individuality and the charm of real garden magic are most often found.

In addition to these various influences of environment, there are certain opportunities in garden making and certain qualities in the finished garden that will bear emphasis.

The opportunities for distinction and special interest in the plan of a garden are not always adequately appreciated. There are inexhaustible possibilities of variety not only in the general garden concept but in the just adaptation of parts and in the details of development as well. The plan is the basic skeleton upon which the garden is built, and whether simple or complex, rigidly formal or free, it exerts a distinct control upon the finished work. It places the lines and accents of the picture. It is not necessary to be original to the point of freakishness, but it is certainly desirable to avoid the stereotyped in garden-making as in any fine art. Simplicity is often appropriate and desirable, but when it becomes a screen for paucity of ideas it does not satisfy.

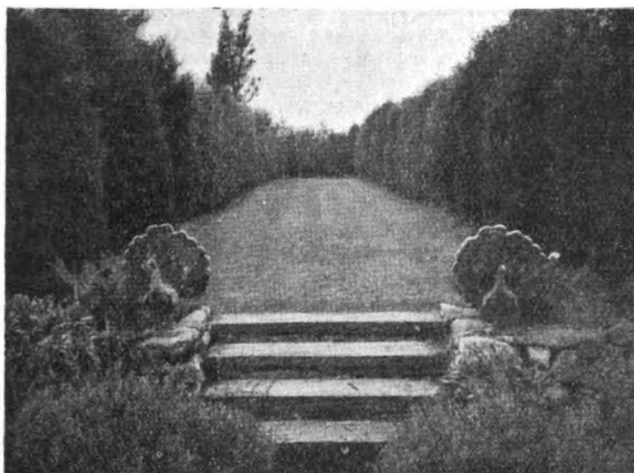
On the other hand, it is possible to over-emphasise the plan



Plan of Garden. House of Free Italian Style

as such, for an agreeable pattern does not in itself always assure full measure of garden beauty. A garden of clean-cut lines and rigid forms, obviously planned and controlled in all its parts, but having no more regard for the living qualities of its plants than did the French or Italian gardens of "mosaiculture," may be interesting as a mechanical achievement or "stunt"; it may be fitting under certain special conditions, it may be beautiful, but it is not likely to have that artistic merit which is achieved only by the appropriate use of the mediums of expression. The ultimate forms, the textures, the colours and the infinite details and subtle harmonies of the garden pictures are made of living materials, and it is in the happy balance and pleasing contrasts of these free-growing elements with the rigid elements imposed by man's control that the most satisfying beauty in garden design is attained. It is that quality of life and growth which distinguishes the garden from the static work of art; it is that quality which requires time for its fulfilment, and is marked by a greater and richer beauty year by year. Intricacy in design and variety or freedom from convention in the handling of details stimulate the imagination, enrich the garden and give it a peculiar interest. Every path and nook and corner is an opportunity, and the wealth and variety of plant forms are a generous palette with which to work.

In that garden which is rich in beauty and interest and suggestion, which has achieved a full measure of harmony with its



THE CEDAR ALLEY, GARDEN AT OYSTER BAY, U.S.A.

environment, we are almost sure to find the subtle quality which for want of a more definite word we call atmosphere. It is, perhaps, that quality which tempts the artist to linger and to paint—the true test of success in a garden.

From the "Architectural Forum."

Oxfordshire Society of Architects.

The first of a course of lectures in connection with the Oxfordshire Society of Architects was given in the Town Hall, Oxford, under the chairmanship of the President of Magdalen.

Mr. Edward Warren dealt with "The Point of View in the Study of Architecture," and asked of the world in general what mental image does the name of Oxford evoke? To those who intimately knew and loved the city—and the terms in this case were almost synonymous—especially to those who had passed some of the most impressionable years of their youth within her walls, the image was an architectural image. The instinct to which the beauty and dignity of these buildings were due was a sure instinct, that of expressing the nobility of "true religion" by noble architecture, and the dignity of "sound learning" by the dignified housing of scholarship. Oxford being what Oxford is, could they doubt for a moment that she had unconscious influence on all receptive minds, which rendered her pre-eminently fit for the conscious and carefully ordained training of students of the great art of which she was so conspicuous an exemplar? She numbered amongst her sons the great name—the greatest, indeed, amongst British architects—of Christopher Wren, as well as such names as John Ruskin and William Morris. The influence of the latter had been revolutionary—or, rather, revivifying—and had spread throughout the civilised world. He was, perhaps, trying to convince the already convinced as to the pre-eminent fitness of Oxford for a school of architecture. Their lectures, then, were, they hoped, forerunners of such a school, and they had the immediate hope that they might be accompanied by classes in architecture, construction and design, primarily intended for young men studying architecture with a view to its practice, whether members of the University, or pupils, or assistants in the offices of Oxford architects, but open to all serious students who would follow a definite course of training.

The lecturer then dealt with the style of buildings in different countries, and went on to say that style or manner had arisen, naturally, from structural necessities and materials, and this he held to be strictly true of all real styles or constructive manners; but it did not, of course, cover adopted or half-adopted fashions in architecture or attempted revivals. In England, and markedly in Oxford, the native, local style of building lingered long after the half-hearted adoption of a foreign manner, known as that of the Renaissance, and derived from the French, the Flemings, and the Germans, who were copying the Italians, who were copying, more or less, the remains of Roman buildings and Greek statuary, which they were rediscovering. The acceptance in this country was for a long time slow and half-hearted; and throughout England, and more particularly in the West, there were many curious and interesting instances of survivals of and reversions to the native manner of Gothic architecture; but none, so far as he was aware, more marked than in Oxford, which had been called the "home of lost causes," and had certainly been so in regard to native Gothic when already that was a lost cause elsewhere.

To the student of architecture, continued the lecturer, and especially to those who were studying it with a view to its

practice, that deepening of consciousness as to all forms of buildings and their accessories was inevitable and necessary. They must have a point of view, and a critical one; they must acquire a fair knowledge of the constructive history of their craft as well as of the recognised and accepted rules of modern construction. Some knowledge, also, not necessarily deep, but accurate as far as it went, of social history and its manifestations in architecture was absolutely necessary. Domestic architecture in especial was the most vivid illustration of social history. Architecture as an illustration of history, and history as an explanation of architecture, were such fascinating studies in themselves that the true student of either would inevitably be drawn to the other. But no mere historical or archaeological reading would lead them far in the understanding of architecture without the earnest study of its basic principles, its constructive needs, and their expression in proportion, balance, and harmony, its protective necessities, and their acceptance and treatment as contributive accessories of design.

The second lecture of the series was given in the Ashmolean Museum, Oxford. Mr. R. P. Jones, M.A., was the lecturer, and Professor Percy Gardner was the chairman. The subject, illustrated by lantern slides, was "The Greek Point of View." A précis of this lecture is as follows:—

Greek architecture comprises the most perfect that has ever been produced. There are two qualities which have to be considered in studying its development. Firstly, that its ornament is essential to its construction; secondly, sculpture is applied to the architectural forms, and is complete and distinct from them. Not more than about a dozen Greek temples exist in anything but a fragmentary state. There is one word which fitly describes Greek work, and that is "lucidity." It is simple and direct and obviously has a timbered prototype. The form and position of the triglyphs are sufficient evidence and indicate this beyond doubt. Greek temples always exist in a brilliant atmosphere. The matter of lighting, although a subject for a great deal of conjecture, is one which was probably considered of small importance by the Greeks. The lighting of their temples lessened as one approached the inner sanctuary. (In reply to a question, Mr. Jones explained that the roof was usually covered with interlocking tiles of thin marble through which a certain amount of light filtered.)

The method of building was from the outside inwards. This was entirely reversed in later ages. The basis of their design was the column with its entablature. Size made no difference, for smaller proportions were used in all buildings whatever their actual dimensions. There was a purpose in the flutes to the columns. The strong sunlight on plain columns gave a very definite line between the light and shady portions of the column, and this might have been thought to have detracted from the æsthetic value. Now the flutes transferred a quantity of light to the shadow and a quantity of shade to the light surfaces. The point was clearly illustrated by lantern slides. Greek architecture was trabecated. There were no arches giving thrusts, and it was, in fact, exemplary of the policy of our present Government in its "tranquility, quietness and sedateness." That being so, there was no need for cementing material, and the various stones and features were built one upon the other with dry joints. After the burning of Athens by the Persians, it fell to the lot of Pericles to produce the great works which formed so important a standard in the chronology of architecture. Photographs of the Acropolis with its Parthenon, Erechtem, Propylea, Temple of Nike Apteros, etc., were shown, from which it was clear that the exterior of a Greek building did not express the arrangement of its interior.

Carefully taken photographs showed the slope of the columns, the horizontal curvature, etc., as examples of mathematical refinement. Photographs were also thrown on the screen of the Theseum, the Temple at Paestum, the Choragic Monument of Lysicrates, the Temple of the Winds, the Temple of Concord, etc.

At the conclusion of the very informative lecture, Professor Gardner, the chairman, thanked Mr. Jones for his lecture, and mentioned that the building in which they were was designed by Cockerell on the model of architecture shown in these Grecian temples, excepting the fact that the back portions had been neglected architecturally.

The secretary of the Society, Mr. Thomas Rayson, in proposing a vote of thanks to the chairman and the lecturer, was struck by the emphasis placed on a point made by Mr. Warren in his inaugural lecture—the fundamental importance of construction in fine architecture. Referring to Penrose as a mathematical archaeologist, the audience were recommended to examine the steps at the west end of St. Paul's Cathedral, London, for their horizontal curvature. He would have liked to have seen photographs of the Bassæ Temple on the study of which Cockerell based his design of the Ashmolean.

Some Principles of Architectural Planning.*

By Arthur J. Davis, F.R.I.B.A.

The art of planning is as old as the history of the human race: its application is universal, as it touches on one side the science of geography, and on the other a knowledge of its laws is necessary to the designer of the humblest wayside cottage. This evening, however, I will only deal with some of the fundamental principles of planning composition, and must perforce eliminate many other interesting, although less essential, aspects of this rather ambitious theme.

One of the advantages of my choice of subject is that it can be dealt with from a purely logical standpoint, and thus the controversy which invariably accompanies all questions of art and style can be avoided. Good planning is synonymous with sound logic and common sense, and I would remind you that this latter quality is far from being as widespread as one would imagine. I hope I will not disappoint those who expect me to disclose any secrets or special tricks in the art of planning, but my purpose to-night will be mainly to discuss some of the universal laws which at all times have governed the process of architectural composition. The lay-out of cities, the setting of public and domestic buildings, the right disposition, division and sub-division of building sites, the correct placing of entrances, light courts, staircases and other features, must of necessity vary with every architectural problem. However, the laws which govern the art of planning are the same to-day as those which guided our ancestors, and, regardless of differences of constructional methods and internal arrangements, will equally affect those who come after us.

In this country planning as an art has been very little appreciated either by the enlightened public or even by architects themselves, and for ten intelligent persons who understand good detail and fine proportion in an elevation there is hardly one who will realise the value of a well-conceived plan.

We cannot be surprised at this when we see that our Royal Academy banishes from the walls of its yearly exhibition all plans and confines itself to the hanging of pretty pictures.

For convenience sake I will divide my paper into three main headings—Town Development, the Planning of Public Edifices and that of Domestic Buildings.

It is generally advisable to approach a subject of this magnitude from an historical point of view and see how its various aspects have been dealt with in past civilisations.

Fortunately there are numerous remains in different parts of the world from which we can form a very accurate idea of the conditions which existed and from these we may conclude that the scientific lay-out of ancient cities was not considered so vitally important as it is to-day. Efforts in town planning then seemed to be confined to the approaches to temples, palaces and other points of interest. In ancient cities the streets were often narrow and squalid, sanitary arrangements almost non-existent, and the methods of dealing with conflagrations, disease and overcrowding were in most cases of a primitive and incomplete nature.

The Acropolis of Athens, impressive as it is, can hardly be considered an example of a model lay-out, and even Rome, under the Emperors, was a vast agglomeration, with its principal monuments and residential districts all crowded together in confusion, without order or regularity. It does not necessarily follow that the early builders were not conversant with some of the principles of town planning as it is understood to-day; on the contrary, many of the ancient Egyptian and Assyrian remains indicate a knowledge of planning and the use of noble effects of perspective which prove that these people possessed considerable knowledge of this art. But, on the other hand, although we may admire the plans of Karnac or Korsobad, we cannot conceive that the great Pyramid and the Sphinx were placed in their relative positions with any preconceived idea of orderly arrangement. In general, the planning of groups of buildings in preclassical times was largely the result of developing conditions. Their architects followed a symmetrical rather than symmetrical patterns. Balance, however, was always aimed at. It must also be remembered that conditions of life in the past were very different from those which apply to-day, where the safety of the inhabitants is a *sine qua non*.

In bygone ages the security of a town, or even a village, depended entirely on the efficiency of its defences, and everything had to be sacrificed to military necessity in order to guard against the attacks of covetous or aggressive neighbours.

The indispensable belt of fortified walls encircling so many ancient cities caused them to be confined within narrow limits and become a jumble of cramped and congested streets and alleys where the inhabitants were crowded together regardless

of comfort and health, for it will be readily understood that the smaller the enclosure the more easy it was to defend. Our principal European capitals—Paris, Vienna, Rome, Brussels, and even London, where the remains of the fortified walls are still to be found, will occur to you immediately as illustrating this statement.

It follows that convenience and sanitation in these cities were usually sacrificed; arterial roads had, of necessity, to converge to the centre through narrow fortified gates. Walls, towers, moats and drawbridges all added to the strength of the fortress at the expense of every other requirement. In time, as sieges and attacks became less frequent and the invention of gunpowder and other discoveries caused warfare to be waged more scientifically, the retention of these belts of defences became less important and most cities were able to expand and spread out beyond their encircling walls. The space occupied by the fortifications was, in time, transferred into boulevards and avenues, and these form to-day the most decorative and charming feature of many Continental cities. The dismantling of military strongholds, however, was only gradual, and in many cases we see the abandonment of the inner ring of the early city only after another and larger circle of forts has replaced it.

Generally speaking, it was only when the art of war was relegated to second place in the evolution of the human race that the planning of cities approached the modern conception. It was chiefly in the vigorous time of the Renaissance when, every intelligent person was keenly interested in the progress of Art and Science, that town planning and the lay-out of open spaces and public thoroughfares took on the character which we all associate with it to-day. Fine town plans of this period are numerous. The city of Nancy, dictated by Louis Quatorze to the glory of Prince Leczinski, the King of Poland, is an excellent example, as are the great town plans of modern Paris and the Ring at Vienna. The skilful lay-out of Buxton, Bath, Cheltenham, Clifton and Plymouth in our own country are also worthy of study.

In the United States, where one would naturally look for the best and latest examples, it is disappointing to note that, in spite of all the advantages their founders had over those of the early European towns, great opportunities have been missed. In New York the famous gridiron plan, a conception without imagination or real practical value, shows how a short-sighted and mercenary policy can mar what might otherwise be a beautiful city. The division of the town into rectangular blocks, laid out regardless of the contours, the beauties of the surroundings or the natural features of the countryside, is artificial and inhuman. All the skill of the modern American architects—and we know their ability to be very great—cannot disguise the "packing case" character of their buildings or overcome the monotony and weariness that the stranger experiences when he strolls through the streets of many of the cities of the New World. On the other hand, it is refreshing to see that in Washington and the new parts of Chicago the gridiron idea has given way to a less stereotyped arrangement.

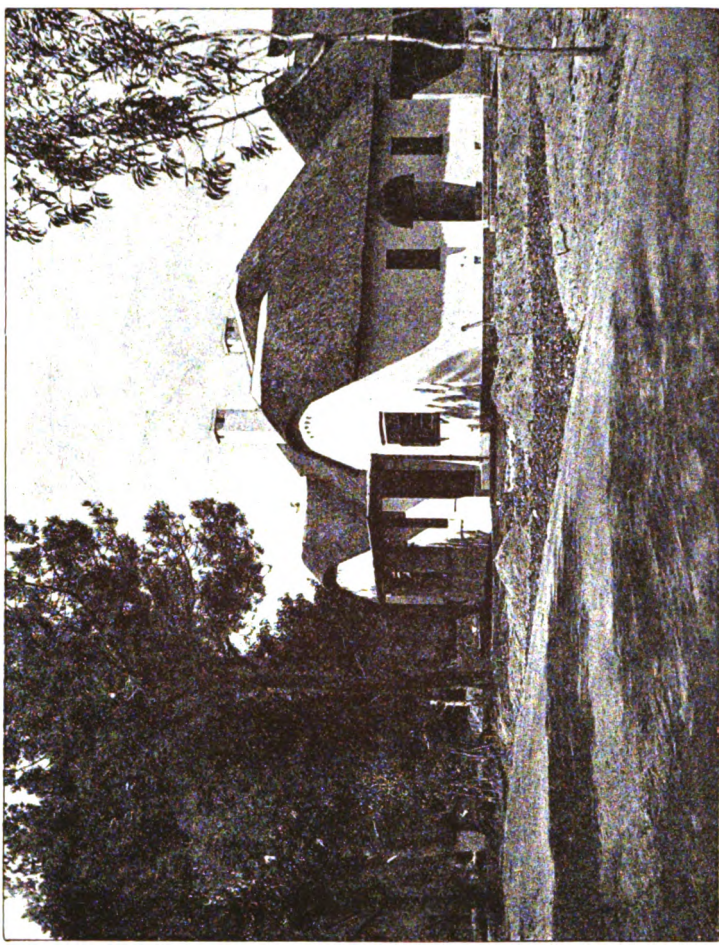
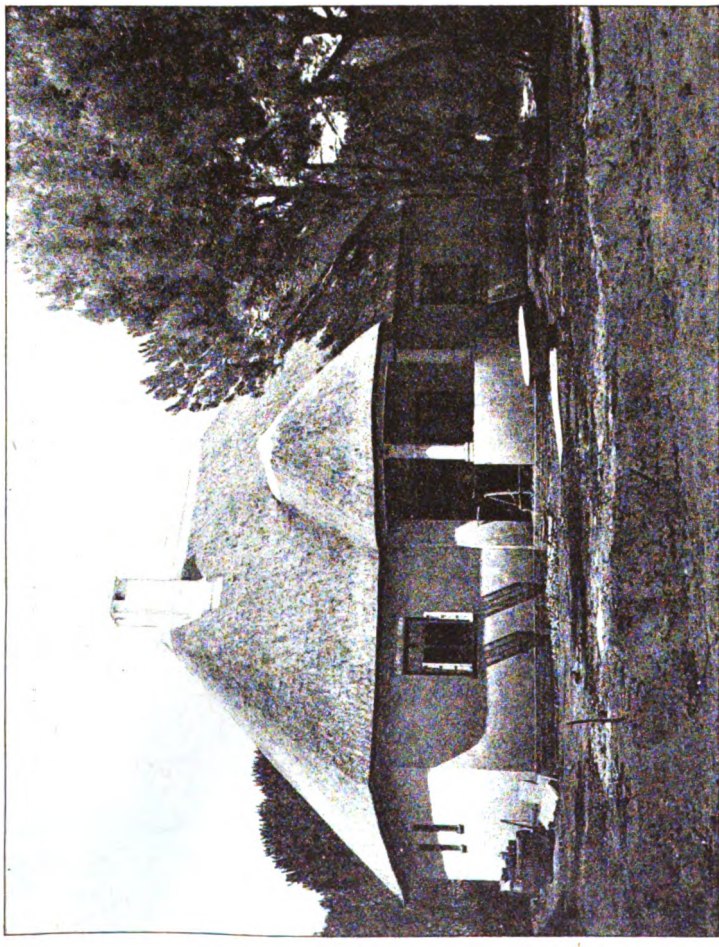
In planning it is variety and the unexpected which appeal, but these qualities must be bound together by an orderly arrangement on sound logical principles.

The requirements of large cities vary from year to year. The enormous and ever-increasing size of our modern towns, the daily ebb and flow of the countless multitudes which inhabit them, the introduction of mechanical transport, and the consequent difficulty of regulating the traffic in the busy hours of the day, have given rise to problems which are almost impossible of solution. Unfortunately, we seem to be unable to profit by the experience of our past failures, and it is deplorable to have to record that cities which have expanded to twice their original size in a relatively short period are often controlled by municipalities whose breadth of vision is limited to their tenure of office. In our own London it is regrettable to see so many missed opportunities to overcome the awkward conditions with which we now find it so difficult to cope. Do we not hear with unavailing regret that the short-sighted policy (the result of the vested interests of the day), caused the abandonment of Sir Christopher Wren's nobly conceived plan for reconstructing the City after the Great Fire. With this glaring example of lack of foresight from which we are still suffering to-day, it might have been hoped that we had learned our lesson and would not again repeat the errors of the past, and yet the confusion continues. We may liken our modern City Fathers to the Bourbons, who had forgotten nothing and learned nothing. It is not my duty to censure or criticise our town authorities, but to give you one example of this lack of vision, do we not see when our latest building, the London County Hall, is completed, the great opportunity of constructing on the south side of the Thames an embankment similar to that opposite, has been missed, and only a narrow footway for pedestrians provided?

* A public lantern lecture delivered at University College, Gower Street, London, on December 5.

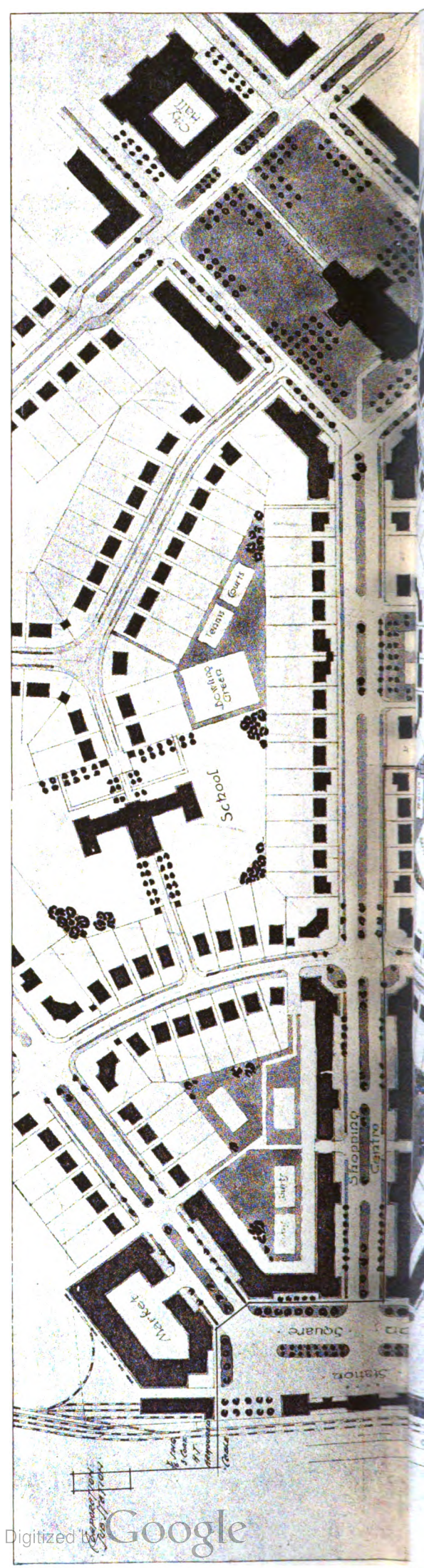
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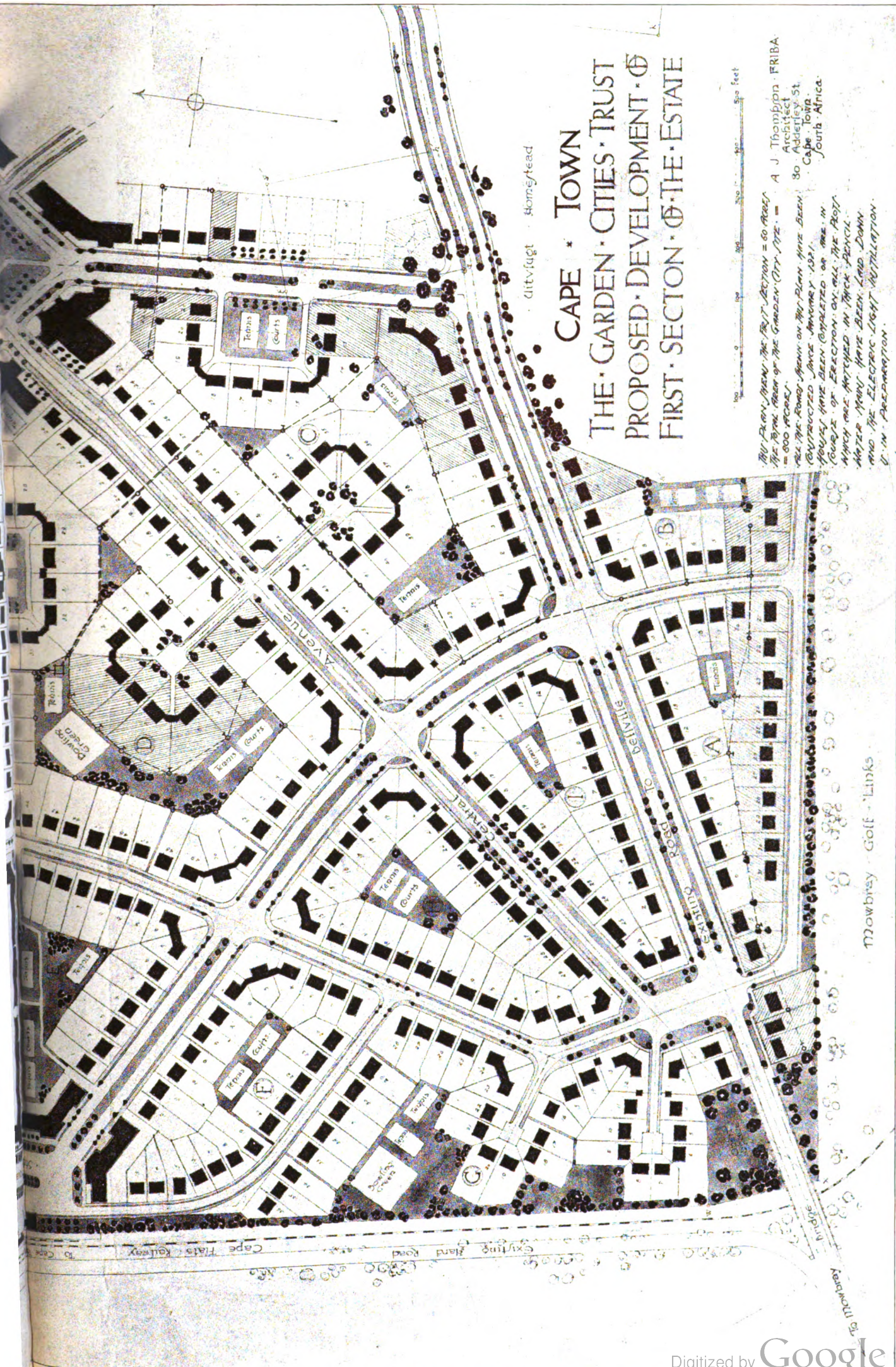
THE ARCHITECT, DECEMBER 8th, 1922.



£1,160 COMPLETE WITH LAND ETC., AND ALL FEES.

£1,348 COMPLETE WITH LAND ETC., AND ALL FEES.



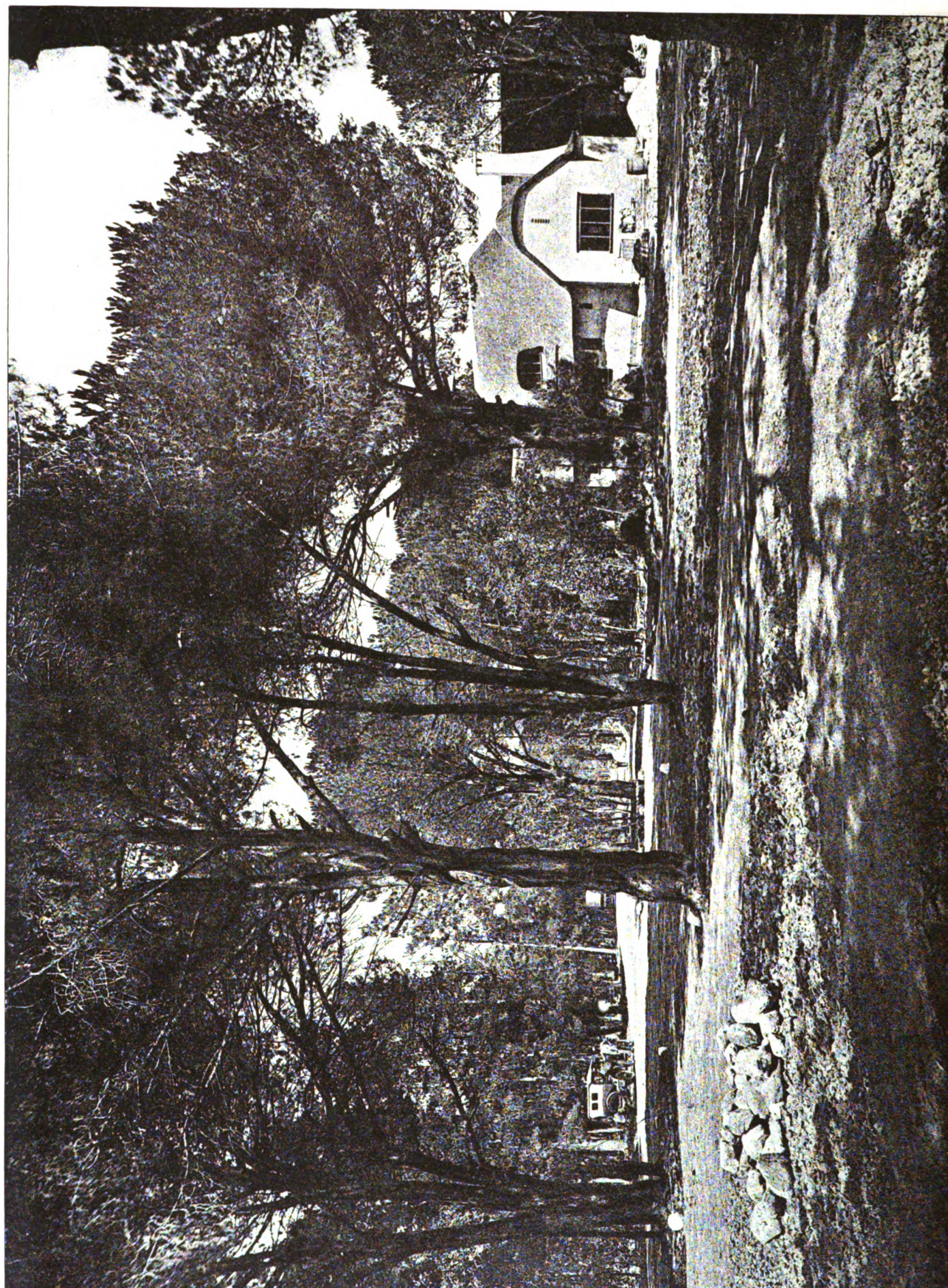


CAPE TOWN
THE GARDEN CITIES TRUST
PROPOSED DEVELOPMENT OF
FIRST SECTION OF THE ESTATE

THE PLAN HEREIN THE FIRST SECTION IS 60 ACRES
THE TOTAL AREA OF THE GARDEN CITIES TRUST IS
800 ACRES.
ALL THE ROAD WORK ON THE PLAN HAVE BEEN
CONSTRUCTED SINCE JANUARY 1921.
HOUSES HAVE BEEN COMPLETED OR ARE IN
COURSE OF ERECTION ON ALL THE FIRST
FIVE ARE MATCHED IN ARCHITECTURE
AND THE ELECTRIC LIGHT INSTALLATION
IS IN PREPARATION.

Mowbray Golf Links

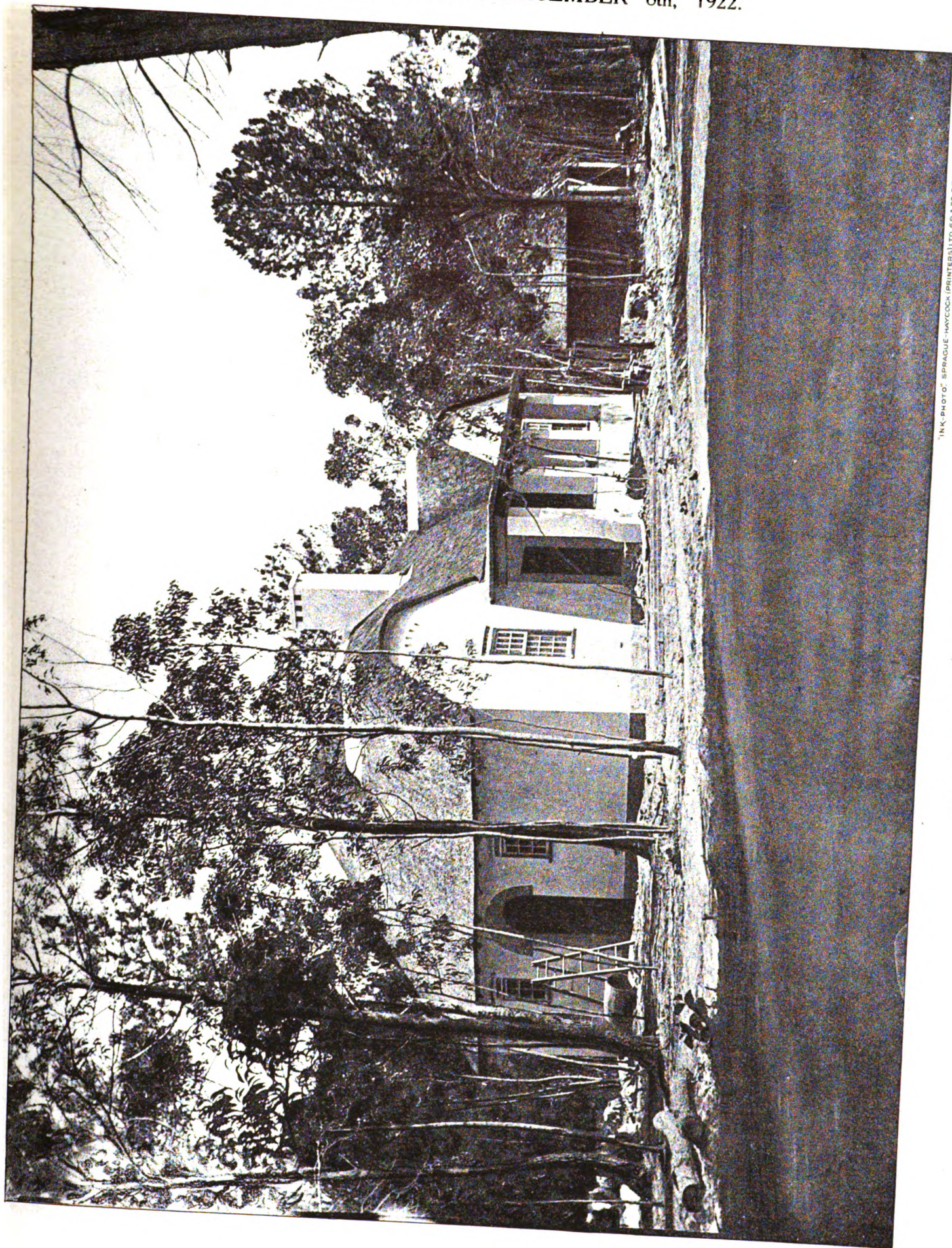
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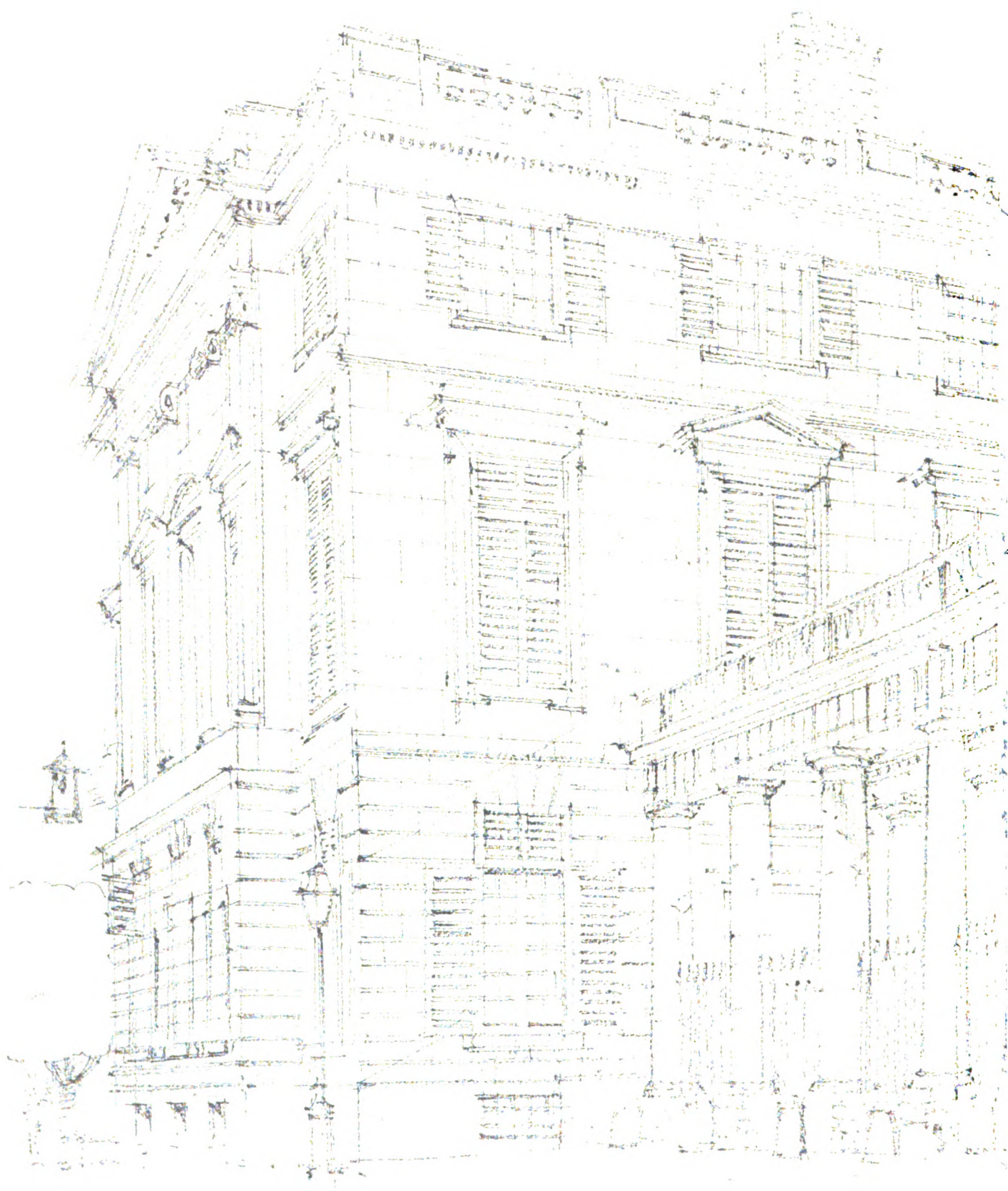
PINELANDS GARDEN CITY, CAPE TOWN.
A. J. THOMPSON, ARCHITECT.

THE ARCHITECT, DECEMBER 8th, 1922.

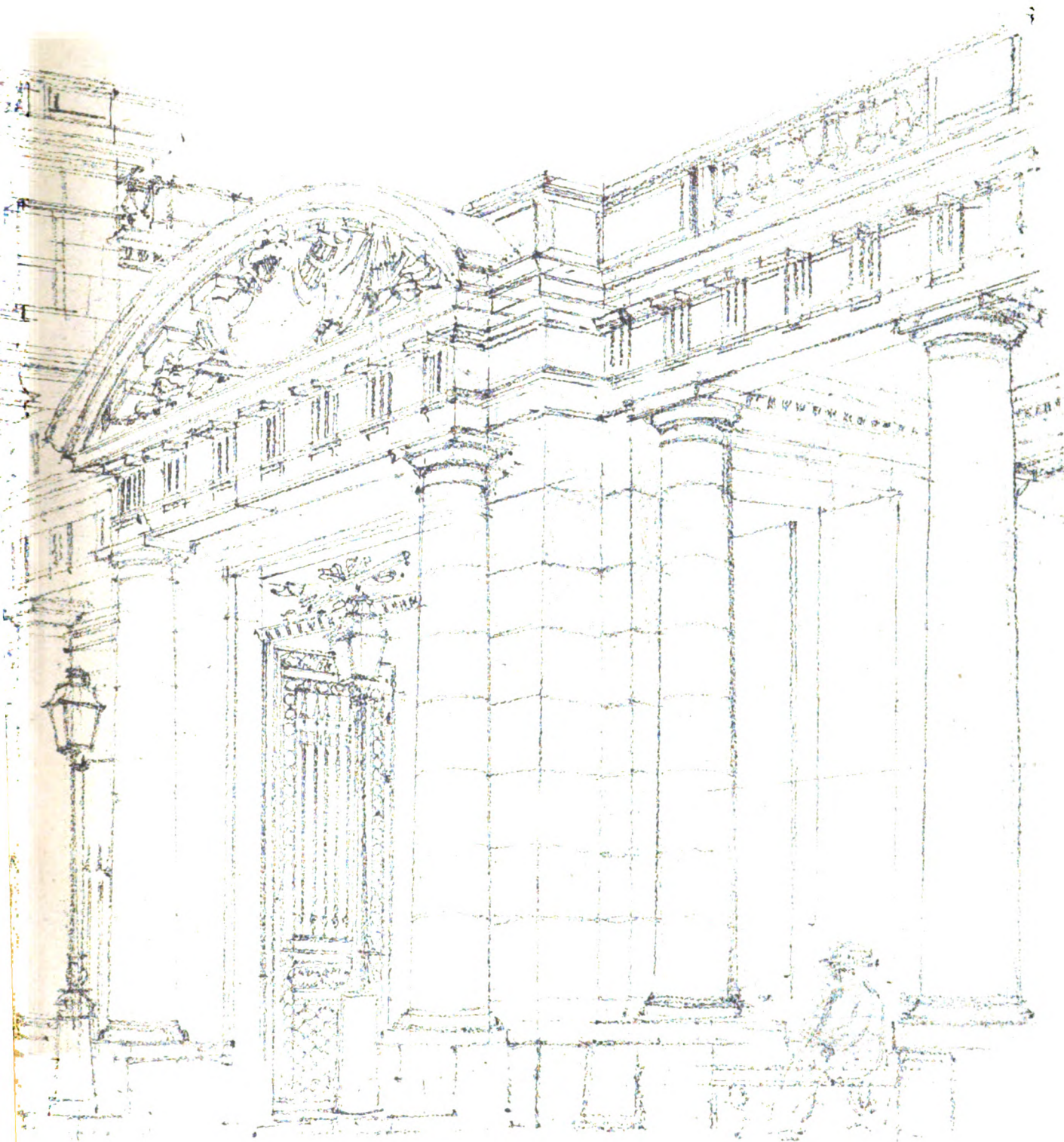


PINELANDS GARDEN CITY, CAPE TOWN.
A. J. THOMPSON, ARCHITECT.

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CEMBER 8th, 1922.



It is extraordinary how easy it is to go astray in dealing with even the simplest schemes if they are not considered from a broad and logical point of view.

The average Englishman in all matters which do not affect him individually, is generally satisfied with half measures. Unfortunately, the policy of compromise so dear to his heart, is more often successful in politics than when applied to the solution of architectural problems.

This lack of personal interest is responsible in no small measure for the confusion and lack of public spirit which have been manifest in so many attempts at improvements carried out without regard to future expansion and development.

Without unduly labouring the point I will refer to the recent illustrations in the Press showing the proposed reconstruction of the Bank of England and some of the neighbouring properties. In view of the alarming congestion which occurs daily in one of the most crowded centres in the world, it would seem obvious that the foremost consideration would be to take advantage of these replanning schemes in order to widen the thoroughfares which converge to that spot. Yet we see that the controversy only touches on the best way of erecting a new bank with the retention of Sir John Soane's original elevations. The totally revised planning of the whole neighbourhood has never apparently even been contemplated.

The Bank of England being a low building, as are many of its neighbours, it follows that if these are replaced by higher structures housing a far greater population than at present, the already too congested streets will soon become absolutely impassable.

Surely the first duty of the controlling authorities should be to say to the owners of these properties, "You shall not be allowed to increase the height of any of your buildings unless you give up to the public a proportionate area on plan." Sentimental regard for an existing structure even of considerable artistic merit should not be allowed to override the far more important demands of public necessity.

Owing to the time at my disposal I cannot dwell any longer on this aspect of the problem. Modern town planning has been treated very exhaustively by many excellent authors who are, no doubt, well known to you, and I must reluctantly pass on to the examination of other aspects of my paper.

I will now consider the question of planning as applied to public buildings on one hand and to domestic architecture on the other.

Although the theory of planning might be divided into many categories, I have purposely chosen these two as I wish to accentuate the difference between the principles of planning a public building as opposed to those which apply to a domestic habitation.

In my opinion all the public buildings of a city should be erected in prominent positions and should be so designed as to clearly denote their purpose to the passer-by, whereas a private dwelling should be more remote in its situation and make no attempt to attract undue attention. This principle applies as much to the sites to be chosen as to their individual treatment. A stranger walking through a city should be attracted by the harmonious grouping and setting of its public monuments. He should be able to discern at the glance which is the cathedral, the town hall, the museum or the opera house. Each of these edifices should bear its special character and leave the observer in no doubt as to its destination. On entering he should find the special department he proposes to visit without the slightest hesitation. He is not in his own house, and, therefore, is not supposed to be acquainted with all the details which comprise its internal planning. It follows that simplicity and directness of approach are essential, and these combined with a certain grandeur and architectural magnificence are the chief characteristics which should adorn every successful public building. These qualities are entirely independent of style and period. They form just as much an integral part of the conception of the Parthenon as they do of the great mediæval cathedrals of Northern Europe. To all the inhabitants of the City the part ownership of these fine monuments should be a source of pride and gratification. In their treatment there is no necessity for modesty or concealment, and both outwardly and internally they should bear the mark of the wealth and taste of the cities which they embellish.

On the other hand, the characteristics of the domestic dwelling are diametrically opposed to this point of view. Good manners demand that the home of a private individual should be kept screened from the curiosity of the passer-by. The moment the owner passes the boundaries of his property he would naturally desire to avoid the obtrusion of inquiring neighbours and the inquisitive gaze of strangers. Thus we see in every country, that in all fine periods of architecture, the typical private house is surrounded by fences and protective walls.

The important rooms overlook enclosed gardens or are planned around an atrium or inner court. Invariably the desire seems to be to avoid attracting undue attention. A fine doorway, porch or entrance gate alone would suggest to the wayfarer the importance of the dwelling. We see this idea applied equally to the early Greek and Roman town houses as to the Moorish kasbah or the Florentine palace of the Renaissance.

Whether these living apartments surround an atrium, a patio or a cour d'honneur, the principle is the same.

In France, the Hotel-Particulier is situated between an entrance court and a formal garden, both screened from the surrounding streets. Our dignified English mansions of the seventeenth and eighteenth centuries also follow this rule. Who has not admired the striking effect of a fine pair of gates supported on noble piers interrupting the monotony of the encircling boundary wall? Through the opening a mere glimpse of a discreetly screened country residence is obtained along the vanishing lines of a shaded avenue. Once inside this boundary a visitor would note with pleasure that every effort has been made to render the property as delightful and as attractive as possible, but the decorative effects whether of the house, gardens, or surroundings, are solely for the delectation of the owner and his friends, and not a means of advertising his wealth and possessions. Dignified town residences are exemplified in Chesterfield and Lansdowne Houses, two excellent types illustrating the principle I have just explained.

I think the "screened in" theory is a sound one, and can be applied to the most modest domestic building. It may appear repetition, but I consider that the first duty of a private house is to be private. May I be forgiven if I here quote the old saying "an Englishman's home is his castle." It provides fine analogy and is true regardless of the size or importance of his dwelling.

In latter years this idea in many cases has been abandoned, and we see with regret both in this country and in America wealthy plutocrats erecting houses, the windows of which can be overlooked from the surrounding streets, the ostentatious owner disdaining modesty and privacy, his aim apparently being to impress the public with the splendour of his mode of living.

Now let us consider the internal arrangement of the well-conceived private house. As the owner will, in time, become acquainted with every nook and cranny, his architect need not necessarily introduce formal methods of planning which may be considered undesirable from the habitation point of view. Here the comfort of the family, the guests and servants should be the foremost consideration. Windows, doors and fireplaces, instead of being placed in a formal relation can be considered from the point of view of comfort, avoidance of draughts, privacy and seclusion, and compensation for the loss of architectural grandeur may be looked for in enhanced domestic convenience.

Here it may not be out of place to consider the question of symmetry in planning, as it is frequently asked "Why are buildings so often laid out in formal and axial compositions regardless of their practical requirements?" There is no doubt that having taken into consideration the situation, levels, and approaches, whenever a symmetrical treatment is possible a more regular and dignified result is obtained. I think that the human mind from natural reasons, instinctively turns to an orderly and balanced composition. A man's body, being itself built on a central axis, it follows that his actions in most cases are subconsciously controlled by a sense of symmetry. When he sits down to a meal he places himself in a chair which has been constructed on symmetrical lines, his plate is put in front of him, his knife and fork disposed on either side, his carpet forming a rectangle under his feet, and his furniture, usually of geometrical shapes, arranged in some sort of order about the room. Naturally the walls which enclose this apartment and its contents if built economically, would be planned in shapes at right angles to each other. When an orator makes a speech in the open air, his audience automatically group themselves in a semi-circle around him. If this assembly had to be enclosed it would be found that the encircling walls would obviously follow the lines of the outskirts of the audience, and would be erected symmetrically in relation to the speaker.

(To be concluded).

The Glasgow Corporation have approved a recommendation by their Finance Committee for the erection of a hall to meet the requirements of the Woodside, Ruchill and North Kelvin districts of the city. There was some opposition. It is proposed to build the hall on vacant ground in Granville Street and Clarendon Street. The cost is estimated at £18,000. The plans show a large hall, which will accommodate 870 persons, and two lesser halls.

The Efflorescence of Concrete, and Cement Renderings.

THE CAUSE AND THE PREVENTION.

By James Scott.

Technically considered, efflorescence is the crumbling to fine powder of crystalline substances of a soluble character. In constructional work, especially in concrete, it often produces, as direct effects of its gradual formation, unsightly white patches, scattered irregularly over the surface. These areas are capable of being washed off by rain or vapour, thereby leaving the main mass less commendable than before. Efflorescence is also an insidious source of weakness, as will be understood from the ensuing remarks. It is therefore objectionable in more senses than one; and should be avoided as much as possible.

When the vapour tension of crystalline products, *i.e.*, the internal pressure of combined moisture, is in excess of that of the surrounding air, they effloresce. Substances of this kind, while crystallising, chemically retain a definite quantity of moisture. If the vapour in their vicinity remains equal in proportion to that in themselves, little or no alteration occurs; but as the air gets drier the moisture inside them has nothing to keep it back; and it therefore presses outwards, and in evaporating away leaves the crystalline substances modified into a pulverulent condition, ready to be easily dislodged.

A good example of efflorescence may be obtained in common washing soda, which will, if some crystals of it are exposed for a few hours, eventually become covered, all over the surface, with a delicate, opaque white powder, easily detachable when touched with the fingers. This contrast with the previously hard and transparent crystals will explain how effloresced salts, and so on, lose their cohesive strength.

The qualities of Portland cement differ to a greater extent than is generally supposed, although broadly speaking they may be very similar to one another. Degrees in the solubility of the many ingredients considerably affect the results of finished work. Commercial Portland cement consists of pulverised clinkers, which have been obtained by the burning together of limestone, or some other form of lime and clay. The resultant powder thus contains lime oxide, silica, and alumina in various combinations. When this cement is watered, the lime is slaked, and becomes largely free lime hydrate or hydroxide (*i.e.*, caustic) and the other components decompose to tri-calcium aluminate, and mono-calcium silicate. Some of this latter is in a gelatinous, or slimy form, and to its action is due the subsequent hardening of the concrete owing to its permeation among the particles. The preceding setting of the mass is occasioned by crystallization of the various items; the minute objects thereby evolved interlocking with one another.

A little magnesium oxide and lime sulphate, besides iron oxide (which acts like alumina) is added, as a rule, to cement to prevent too rapid setting. They do not appear to have much influence on the general modifications.

In a good cement the soluble residues become sealed up in minute cavities throughout the remainder of the cement; but there is always a liability for them to leach out when they get remoistened. With inferior Portland cements the trouble is accentuated. The existence of the soluble ingredients can be proved by breaking off a piece of concrete, when it has set and hardened, and then immersing it for a few hours in a small glass jar of distilled water. The last named should be poured off and evaporated either by exposure to the air or by heat. There will be left in the vessel soluble substances, prettily arranged as dry white matter.

Efflorescence upon Portland cement work is intensified by the use of unwashed, or badly prepared, sand. The ingredients of sea-water are very liable to efflorescence. They include sodium chloride (this when refined is ordinary table salt), potassium chloride, magnesium chloride, magnesium bromide, magnesium sulphate, and calcium sulphate. (By the way, lime and calcium are identical, these being two names for one thing.) The amount of sodium chloride is many times larger than that of the others; and constitutes the bulk to which the characteristic saltiness of the sea is due. Traces of ammonia, nitrates, and iron, are also present, but are too small to need attention.

Sand holds quite a lot of saline deposits, which have adhered to it during the retreat or evaporation of the water it has been associated with. River sand naturally has less than other kinds, but since the saltiness of the sea is due to the carrying thereto of the salts (after these had been dissolved out by rain from soil and rocks) in the numerous rivers, the beds of the latter have got impregnated with them in solution. They have been prevented from returning up the rivers, and thus rendering them saltish because of the continuous flow of fresh water from its source. These points should not be overlooked. But salts are also distributed from sand dunes and kindred hills, through,

over, or between which rain travels, thereby carrying them into quarters generally regarded as devoid of such additions.

These facts show how incumbent it is that all sand used in the composition of cement concrete and renderings, should be thoroughly washed, so that it shall not add to the efflorescing substances.

Minute crystals of soluble compounds are obtained by evaporating, on glass, some of the water in which common building sand has been soaked for a short time. If a few drops of the water were exposed to the air overnight, a film of white crystals would remain. The instant that water touches these objects they re-dissolve, showing how weak they are. If left in the sand to any appreciable quantity, they would always be capable of efflorescing.

Various salts can be obtained by mixing cement with excess water, and then evaporating some of this liquor on glass. The crystals thus obtained are readily soluble and capable of efflorescence. The same results occur when water is poured over cement (preferably on glass), and the water which trickles round the margin is evaporated.

In efflorescence on concrete salts-silicates, aluminates, etc., are produced and the mere touch of a finger is enough to dislodge the loose white particles.

These results can be proved experimentally, for they occur in practice. In the latter case, however, integrity is soon lost: because there is a constant change in the state of the atmosphere, temperature and moisture continuing to be modified quite remarkably.

It should be borne in mind that in cases where concrete is submerged in salt water, very different actions proceed to what go on in above-earth, and similar positions. The water is already saturated with salt, and is therefore not likely to soak it out from the concrete. Again, the continuous presence of any water which passed into the pores available for it, would help to uphold the mass, as water is incompressible. Still, it is preferable to avoid the presence, inside the structure, of any salt. Close observers have noticed that efflorescence often occurs just above the water line.

Suppose we have an erection of cement concrete in which soluble matter is present as usual. Rain, vapour, or (if it is submerged) fresh water soaks into it, dissolves the soluble ingredients, and then these emerge amalgamated to the surface, where they effloresce if exposed to the air; or wash away if beneath water. In this manner the concrete becomes rapidly porous, on a minute scale, and consequently weaker. In the event of air-free work, subsequent rains, vapours, and the like, remove the superficially spread salts, and leave the inside full of empty pores. This state allows tiny crystals of properly set constituents to subside, and so becomes the forerunner of continued disintegration.

It is therefore advisable to render it, at the beginning, absolutely waterproof by adding a cement waterproofing powder (one or two pounds per one hundred pounds of Portland cement is sufficient), since then neither rain, vapour, nor standing water can percolate through and reach what is nominally soluble matter; but which really becomes insoluble owing to the chemical and mechanical actions of the remarkable protective addition mentioned. The concrete then becomes impervious.

Royal Institute of British Architects.

The following are notes from the minutes of the Council meeting held on November 20:—

Architects' Fees for Housing.—It was decided to recommend the General Body to amend the Scale of Charges by omitting Clause 9 and adding a footnote calling attention to the General Housing Memoranda of the Ministry of Health now governing the fees payable to architects.

Architects and Speculative Housing Work.—The Practice Standing Committee have arranged to confer with representatives of the following bodies upon the question of deciding upon a Scale of Fees for Architects in connection with speculative housing work:—

The National Federation of Building Trades Employers.

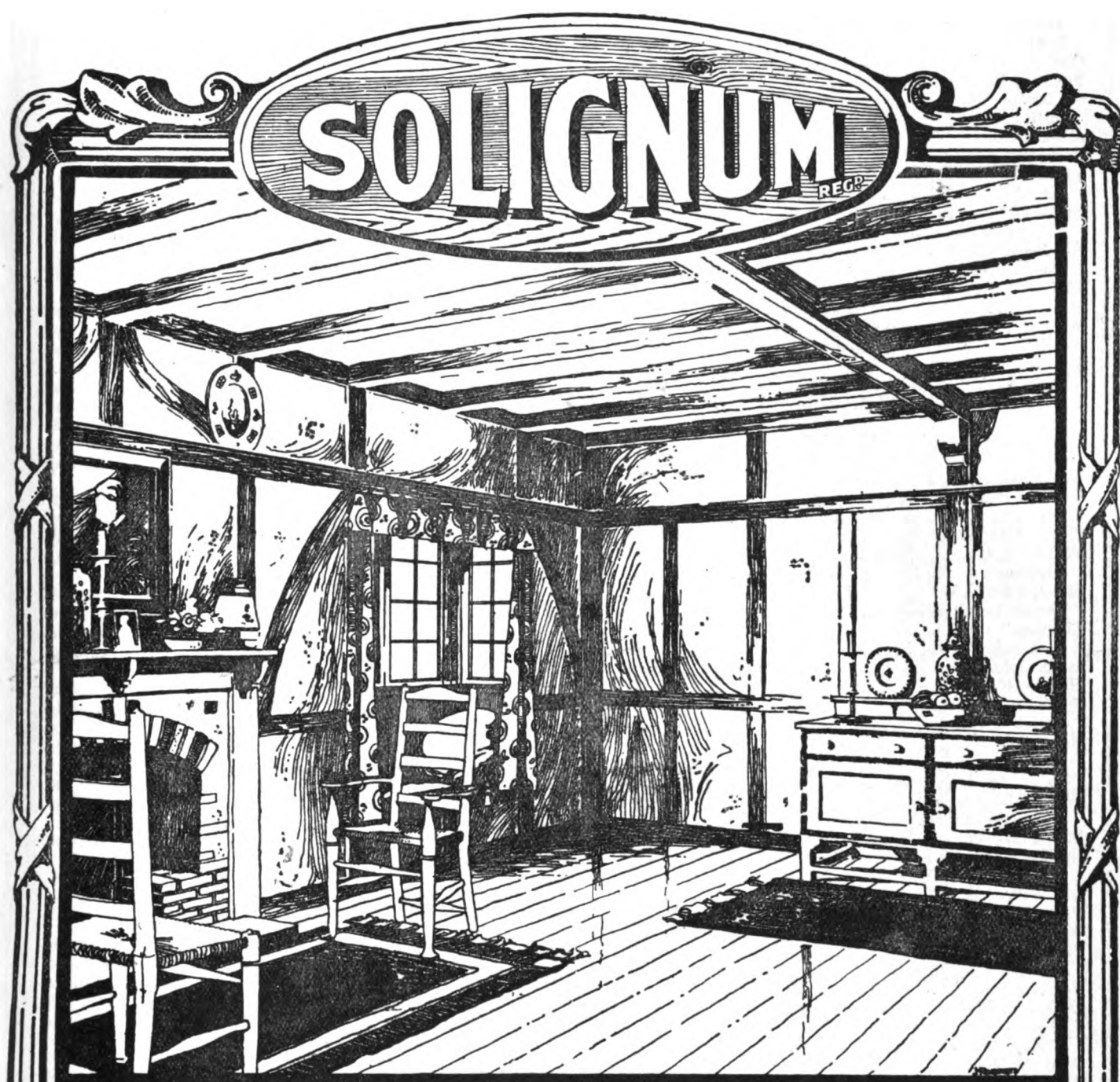
The National Federation of House Builders.

The London House Builders' Association.

The R.I.B.A. Certificate Book.—On the recommendation of the Practice Standing Committee it was decided to restrict the sale of the R.I.B.A. Certificate Book to members and licentiates of the Royal Institute.

Architects and Limited Liability Companies.—The Council are of opinion that it is undesirable for members of the Royal Institute to form themselves into limited liability companies for the purpose of carrying on the profession of an architect.

Annual Dinner.—It was decided that the R.I.B.A. annual dinner should be held on February 26, 1923, in connection with the celebration of the Bicentenary of Sir Christopher Wren.



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Solignum simply applied cold to UNPAINTED wood penetrates the fibrous cells, destroying and preventing the development of destructive germs. It is a certain preventive of dry rot. Solignum imparts a rich stain to the wood, emphasising its natural grain, with colours soft and pleasing.

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Forthcoming Events.

Friday, December 8.—London Society. Meeting at 18 John Street, Adelphi, W.C. Paper by Mr. H. A. Cox, entitled "London before the Great Fire and Now." 5 p.m.

Town Planning Institute. Meeting at the Institution of Civil Engineers, Great George Street, Westminster. Paper by Professor P. Abercrombie, M.A., A.R.I.B.A., entitled "The Site for London University." 6 p.m.

Institution of Heating and Ventilating Engineers. Meeting at the Engineers' Club, Coventry Street, W. Paper by Mr. A. H. Barker, B.A., B.Sc., Wh.S., entitled "Centrifugal Pumps as applied to Heating Installations." 7 p.m.

Saturday, December 9.—Royal Academy of Arts. Distribution of Prizes to the Students. 9 p.m.

Royal Institute of British Architects. Visit to Messrs. Farmer and Brindley's Marble Works. 10.30 a.m.

Monday, December 11.—Surveyors' Institution. Meeting at 12 Great George Street, Westminster. Papers by Major E. Meacher, entitled "Food Production during the War," and by Mr. Harry German, entitled "The Agricultural Position and the possibility of stimulating Economic Production in the Future." 8 p.m.

Architectural Association Lyric Club. "An Architectural Revue," at 34-35 Bedford Square, W.C.1. (Five nights.) 8 p.m.

Incorporated Clerks of Works' Association of Great Britain. Meeting at Carpenters' Hall, London Wall, E.C. Paper by Mr. Noel Heaton, B.Sc., entitled "Recent Progress in the Protective Value of Paints." 7.45 p.m.

Tuesday, December 12.—Architectural Association Lyric Club. "An Architectural Revue," at 34-35 Bedford Square, W.C.1. 2.30 p.m. and 8 p.m.

Illuminating Engineering Society.—Meeting at 18 John Street, Adelphi, W.C. Paper by Mr. Haydn T. Harrison, entitled "Recent Developments and Modern Requirements in Street Lighting." 8 p.m.

Wednesday, December 13.—Royal Society of Arts. Meeting at 18 John Street, Adelphi, W.C. Paper by Sir Sidney F. Harmer, K.B.E., Sc.D., F.R.S., entitled "The Fading of Museum Specimens." 8 p.m.

Architectural Association Lyric Club. "An Architectural Revue," at 34-35 Bedford Square, W.C. 8 p.m.

Thursday, December 14.—Architectural Association Lyric Club. "An Architectural Revue," at 34-35 Bedford Square, W.C. 2.30 p.m. and 8 p.m.

Edinburgh Architectural Association. Meeting at 117 George Street, Edinburgh. Paper by Mr. Emory Chubb, M.I.M.E., entitled "Development of Modern Security Work." 8 p.m.

Sheffield, South Yorkshire and District Society of Architects and Surveyors. Meeting at 15 St. James' Row, Sheffield. Paper by Mr. C. H. Reilly, F.R.I.B.A., entitled "The Modern Architecture of two London Streets—Regent Street and the Strand.

Incorporated Institute of British Decorators. Meeting at Painters' Hall, Little Trinity Lane, E.C. Paper by Mr. Maurice Drake, entitled "Technique of Mediaeval Glass Painting." 7.30 p.m.

Friday, December 15.—Architectural Association Lyric Club. "An Architectural Revue," at 34-35 Bedford Square, W.C. 2.30 p.m. and 8 p.m.

At a meeting of structural engineers held at the University of Manchester recently it was decided to form a Lancashire and Cheshire branch of a new organisation which, if the expected legal authorisation is given, will be known in future as the Institution of Structural Engineers. Mr. E. Fiander Etchells, president of the Concrete Institute, was the principal speaker.

The Newcastle Corporation have received the sanction of the Ministry of Health to a tender submitted for the conversion into baths and wash-houses of the Star Laundry, Benwell. Messrs. Davison, of Blaydon, are the contractors, and Messrs. W. Dixon and Company, Newcastle, will carry out the engineering work. The total cost will be £15,211 compared with the original estimate of £14,025. The work is to be proceeded with at once.

The Council of the Royal Institute of the Architects of Ireland at their November meeting passed the following resolution unanimously:—"That the Royal Institute of the Architects of Ireland, recognising the great historic, civic and æsthetic value of the partially destroyed public buildings in Dublin, such as the Custom House, the Four Courts, etc., desire to place on record their conviction that those buildings should be most carefully preserved, and, as far as possible, restored to their former condition. That, in the meantime, all necessary steps should be taken to protect the walls, etc., from injury by weather or otherwise until restoration is possible."

Birmingham Architectural Association.

At a meeting of the Birmingham Architectural Association held on Friday, December 1, to which the members of the Birmingham Institute of Civil Engineers were invited, Mr. H. Jackson, A.M.I.C.E., A.M.I.M.E., read a paper in which he discussed the stresses in some important building structures and their transference to the ground.

"It is," he said, "impossible to draw a hard and fast line of distinction between those structures which may be called architectural and those called engineering. The former must of necessity comply with the laws of statics to be possible, while the latter, if they are to be pleasing as well as useful, must not offend architectural good taste. When, however, structures verge on the border line of the untried when new and daring conceptions are anticipated, the co-operation of the two special branches of knowledge becomes desirable, and this joint meeting of our Associations is an endeavour to foster this spirit of co-operation."

We have to live by our profession, and if part of an architect's fees are to go in paying for an engineer's co-operation, so as to save his client's expense, and at the same time reduce the sum total of his own fees, he has little inducement to seek co-operation.

The first building Mr. Jackson discussed was the Roman Catholic Cathedral at Westminster. He showed several drawings and lantern slides, illustrating the construction of the dome and its supports, and also showed, by means of a small model, how the horizontal force necessary to prevent the bursting of the dome was supplied by the supports.

Passing to the question of the foundations, Mr. Jackson said that uniform stressing of foundations is necessary if local sinking is to be avoided, and instanced the case of St. Paul's Cathedral, in which serious sinkings, due to the uneven distribution of loads, have taken place.

The second building the lecturer referred to was the Liverpool Cathedral, in illustration of which he exhibited a blue print showing the plan of what is nominally the East end, and an original drawing showing sections, which, he said, Mr. Gilbert Scott had kindly lent him.

Lastly, Mr. Jackson discussed the roof of the Westminster Hall, and showed a lantern slide of a model of the truss illustrating the way in which the walls had been forced inwards.

At the conclusion of the paper a vote of thanks to the lecturer was proposed by Mr. C. S. Madeley, A.R.I.B.A., and seconded by Mr. J. B. Surman, A.R.I.B.A., and a discussion took place on the desirability or otherwise of introducing tension resisting members into buildings of a monumental character.

The vote of thanks to Mr. Jackson was then carried unanimously.

An Important Amalgamation.

An amalgamation of importance to builders and constructional engineers, has, as we recently foreshadowed, been arranged whereby the "Poilite" factory and Asbestos-Cement business of Bell's United Asbestos Company, Ltd., and the "Everite" factory and Asbestos-Cement business of the British Everite and Asbestilite Works, Ltd., will be carried on at the present addresses of the two companies in Southwark Street, London, and 29 Peter Street, Manchester, under the same management as before, but under the name of Bell's Poilite and Everite Company, Limited, which has been registered with a capital of £500,000.

Bell's United Asbestos Co., Ltd., are well known as the pioneers of the Asbestos industry, and were also the first to make Asbestos-Cement Building Materials in the British Empire, while the British Everite and Asbestilite Works, Ltd., were the first to produce corrugated asbestos-cement sheets in Europe, which, with other asbestos-cement products, are extensively known as "Everite."

The new company will thus possess two extensive and well-equipped factories—one at Harefield (Middlesex), and the other at Widnes (Lancashire) in the centre of a great industrial area. It is expected that by standardising their manufactures the new company will be able to effect deliveries from the factory nearest to customers, thereby saving transport charges and giving the most prompt and efficient service. Through co-ordination of effort it may be anticipated that still further progress will be made in the direction of improvements in the admittedly high standards of quality of Bell's Poilite and Everite materials.

The new company announces that the amalgamation takes effect as from December 1.

An extension of the Westminster Embankment by Grosvenor Wharf at a cost of £160,000 is suggested by the L.C.C.



AUSTRALIA HOUSE.
A. Marshall Mackenzie & Son, F.F.R.I.B.A.
Architects.

From an original Etching by
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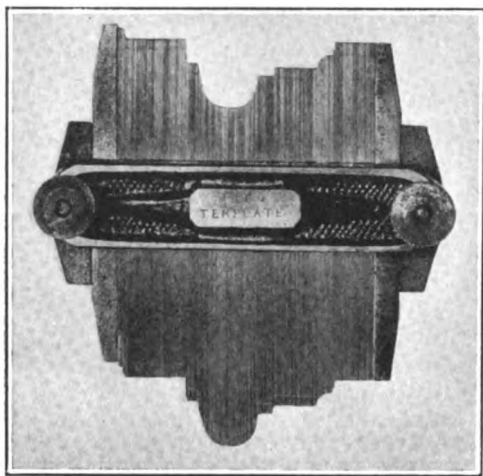
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Architects' Fees for State-aided Housing Schemes.

The Ministry of Health and the Tribunal appointed by the R.I.B.A. are anxious to obtain a settlement of all claims for architects' fees in connection with State-aided housing schemes without further delay. Architects who still desire the assistance of the Tribunal are therefore requested to apply to the Secretary of the R.I.B.A., 9, Conduit Street, W., on or before December 31, 1922. The Tribunal cannot undertake to deal with cases submitted to them after this date.

The "Maco" Adjustable Template.

The task of obtaining an exact profile or shape of anything by means of cutting and filing the usual piece of sheet metal can be costly, arduous and unsatisfactory. The "Maco" patent offers a most welcome alternative, for it converts what used to be the work of hours into minutes, and yet gives a perfect facsimile. This machine is composed of hundreds of very fine pieces of steel or brass, the thickness of each being .007 inch. They are held in position by two clamps, secured by thumbscrews and springs, by the tension of which the pieces of steel minutely take the shape of anything they are pressed against. The "Maco,"



which is a British invention and of British manufacture, is made in seven sizes ranging from 1½ inches to 24 inches, and at prices varying from £1 to £30. Such an expenditure must mean a substantial economy wherever templates are frequently called for. It is a neat tool which is simplicity itself in application, and with reasonable care should have a long and very useful life. It may be obtained from Mr. E. James Brown, 12 Montserrat Road, Putney, S.W.

General.

One of the largest blocks of limestone ever taken from a Derbyshire quarry is to be erected at Harpur Hill, near Buxton, as a memorial to quarrymen killed in the war.

H.M. Office of Works have decided, on the recommendation of the Ancient Monuments Board, to include St. Mary's Abbey precinct walls at York in the list of ancient monuments.

Mr. R. H. Buckley, who for fifteen years was borough engineer of Mossley, Lancashire, has been appointed deputy county surveyor of Essex at a salary of £600 per annum, with travelling expenses.

The Prince of Wales has sent a cheque for £100 to the Dean of Exeter in response to the Cathedral appeal for half a million shillings for the restoration of the fabric. The appeal has so far raised just over £10,000.

A meeting of Hull citizens held last week in the Guildhall appointed an executive committee of thirty-six members for the purpose of erecting a cenotaph, "to serve as an everlasting memorial to our fellow-citizens who fell in the great war."

The Metropolitan Water Board have accepted the tender of Messrs. Wm. Moss & Sons, Ltd., amounting to £5,254, for the extension of their Deptford pumping station, and that of J. E. Johnson & Son, Ltd., amounting to £5,129 for extensions at Lea Bridge pumping station.

The Ministry of Health has sanctioned the borrowing by the Hull Corporation of £12,192, for the provision of an underground public lavatory in Victoria Square. The period allowed for repayment is thirty years. This is the first step towards clearing the site for the Ferens Art Gallery.

The Borough Engineer at Scarborough was instructed by his Town Council on Monday last to proceed at once with the first part of a remedial scheme rendered necessary by reason of the

North Cliff subsidence. The estimated cost of the complete work is £76,000, of which £20,000 will be required for the first portion.

By 43 votes to 15 the Islington Borough Council have decided to appoint a special committee to deal with the works at present being executed by its Building and Maintenance Department and to take steps to wind up that department at the earliest possible moment. The department was initiated by the late council, which had a Labour majority.

Ashton-under-Lyne Corporation have accepted the offer of the Ministry of Health to permit the building of 30 State-aided houses, conditional on the Corporation erecting a similar number. Land for 1,000 houses was purchased by the Corporation under the national housing scheme, but only 30 have been erected.

Greenock Dean of Guild Court have passed plans submitted by the Corporation for the erection of 84 dwelling-houses at Upper Cornhaddock. They will be of the tenement type, and will consist of ten single blocks each containing six houses, and two double blocks each containing twelve houses. The dwellings will be of three apartments.

Messrs. Puttick & Simpson, auctioneers, 47 Leicester Square, W.C., announce a two-days' sale of valuable books and manuscripts on December 13 and 14. The sale will include the architectural library of the late Mr. A. H. Newman, F.R.I.B.A. (of Newman & Newman, 24 Railway Approach, London Bridge), which contains a number of important works.

Two large "finger-posts," specially designed at the Hull Art School, and placed in the principal squares of the city—the Paragon Square and the City Square—during the visit of the British Association to Hull, are to be removed. They were erected to point the way to the Guildhall, the City Hall, the Museum, and the School of Art, and they cost about £140. It is stated that an offer of £1 each has been accepted, the purchaser to bear the expense of removal.

The following figures show the progress that has been made in State-aided housing schemes in Scotland to October 31, 1922: Permanent houses completed, 12,144; temporary houses completed, 665; reconstructed houses completed, 89; houses completed under the private subsidy scheme, 2,160; total, 15,058. There are 7,631 houses at present under construction in connection with housing schemes carried out by local authorities, and public utility societies. The total amount paid by the Scottish Board of Health in respect of the 2,160 houses completed under the private subsidy schemes is £522,936.

According to the *Liverpool Daily Courier*, important improvement schemes are to be carried out at the pierhead end of Water Street, Liverpool. Messrs. Holt & Co. are to erect a building on a site bounded by Fenwick Street, Drury Lane and Water Street, with the frontage set back 18 ft. from the latter thoroughfare. The building is to cost £1,000,000, and it is declared will rival, if not excel, the Cunard Building. The Bank of Liverpool scheme will probably exceed £500,000. A block of offices is to be erected on the site of the present Brown's Buildings, opposite their present quarters. As soon as the new premises are completed, the Bank will set back their present building so as to fall into line with Messrs. Holt's new building. Thus the total width of Water Street will be 72 feet.

The usual monthly meeting of the Council of the Incorporation of Architects in Scotland was held at 117 George Street, Edinburgh, on November 30, Mr. T. P. Marwick, president, in the chair. The scholarships and bursaries recommended by the Education Committee for the promotion of architectural education were approved. It was reported that considerable progress had been made in the matter of instituting a Scottish degree in architecture. The Architects' Registration Bill and the Landed Property Practitioners' Registration Bill were under consideration. A report was submitted by the Incorporation's representatives as to the work done in formulating a new building code for Scotland. The president was appointed representative to the Grand Committee making arrangements for the Sir Christopher Wren bi-centenary celebrations. Two associates and one student were elected, and there were read applications for membership from one fellow, six associates and seven students.

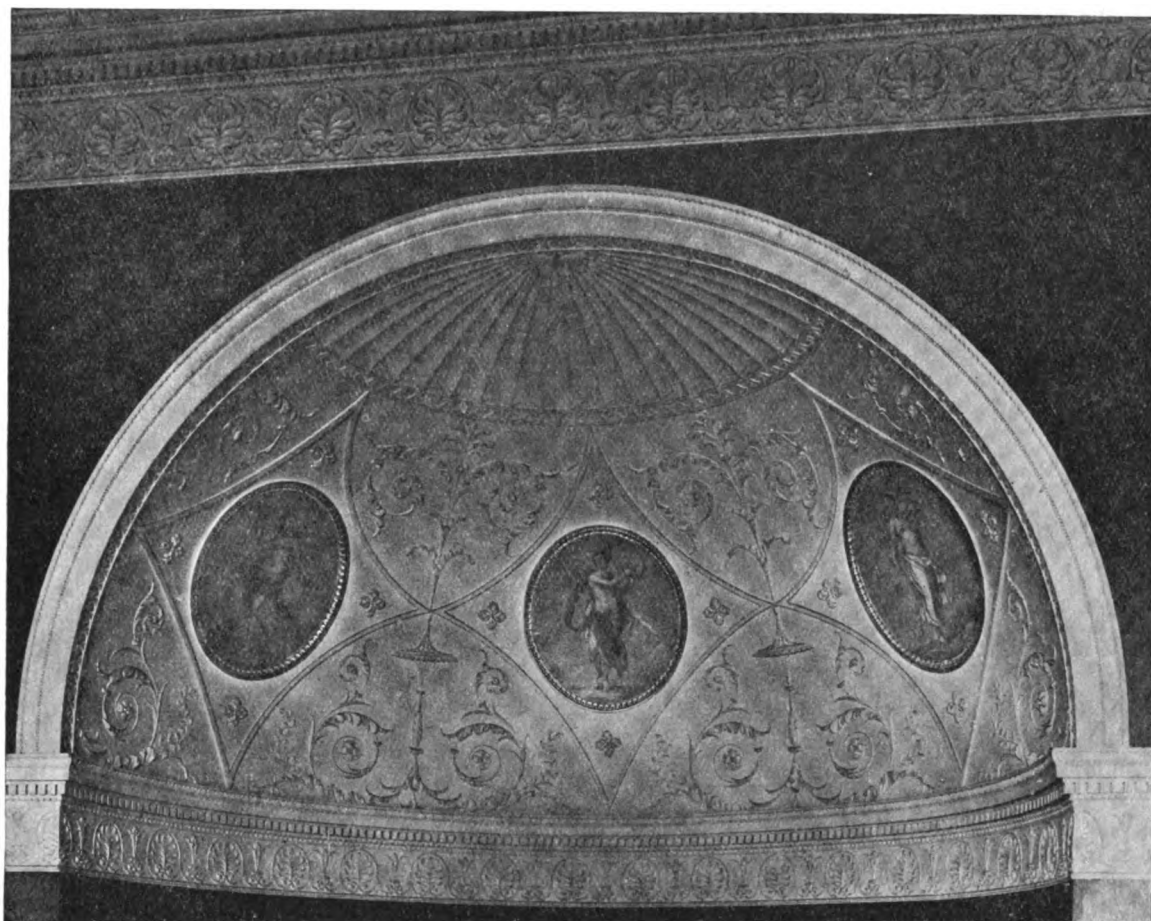
Trade Notes.

Messrs. W. Nicholson & Son (Leeds), Ltd., master builders and timber merchants, have purchased the whole of the valuable stock of walnut, mahogany and other hardwoods from Mr. Parkinson, of Liverpool, who had a reputation in the trade for his knowledge of all kinds of figured and plain hardwoods. Messrs. Nicholson now hold one of the largest stocks of dry walnut, figured walnut, and mahogany in the North.

In consequence of the retirement of Mr. J. H. Sams as managing director of Lips Ltd., Mr. W. J. Yetton has been appointed manager. Mr. J. H. Sams will remain on the board of directors.

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HEAD OF A NICHE IN THE DINING ROOM, HEATON PARK, *circ.* 1772.**English Decoration and Furniture of the later XVIII Century.***

The phase of decoration of which Miss Jourdain gives a well-written and scholarly review is that which almost exactly coincides with the reign of George III, and covers the period when architecture was slowly becoming enervated by the decay of tradition and the growth of antiquarianism. It may be described as the brief Indian summer of life which in many cases precedes death. The paralysing influence of a culture which had no roots in national history or tradition, which substituted an exotic standard of taste for the vigour of a national expression of style, is apparent in even the best of the work of a period which the revolution of fashion's wheel is once more bringing into vogue. The work of Wren and his immediate successors was dismissed as being crude and coarse, and Sir William Chambers may be regarded as one of the last of English architects whose work shows some of the vigour of an earlier period. We instinctively feel we are contemplating the work of an age of lesser men sustained by very little inspiration and dominated for the most part by no enthusiasm. It was natural that the æsthetic ideals of such a time should have been uprooted as easily as light weeds by the sudden growth of commercialism in the early decades of the nineteenth century.

On the whole the most interesting work of such a period is often to be found in the provinces, for there

tradition died more slowly; and if the work of lesser architects missed the elegance of their more fortunate and fashionable brethren in London, it is frequently more interesting because it is still somewhat influenced by earlier and freer methods of design. It is also natural that the most noteworthy and on the whole most satisfactory work of the period is that which was produced by the brothers Adam, because they were no mere professional dilettanti, but shrewd men of business and successful speculators, a fact which probably did much to save their work from the general level of dullness which antiquarianism was bringing in its train. Both in their general design and their choice of detail they were, to use the catchword of the time, "vastly elegant," as is especially shown in the design of chimney-pieces, ceilings, and other decorative features, nor can we wonder that these have in many cases become models on which much modern design is founded. Like the decorative firms of to-day, they designed the furniture and movable appurtenances of civilisation: unlike most modern decorative firms, they showed genius and knowledge in doing so. But they stand apart in this, both from the architects who

* "English Decoration and Furniture of the Later XVIII Century, 1750-1820," by M. Jourdain. B. T. Batsford, Ltd. £3 3s. net.



STAIRCASE, HAREWOOD HOUSE, YORKSHIRE, *cir.* 1769. ROBERT ADAM.

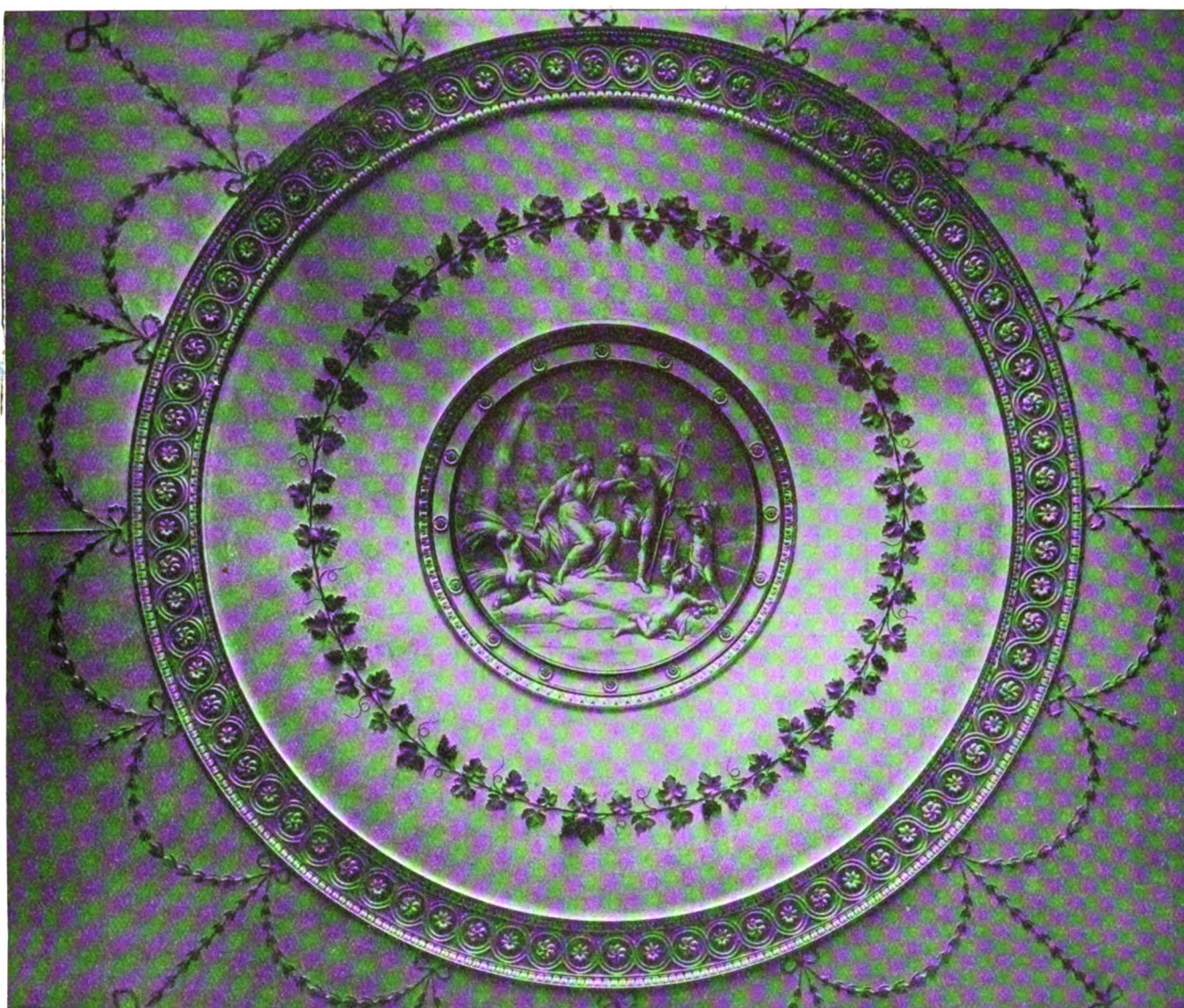
preceded and those who followed them, until the latter in their turn were swept away in the waves of the Gothic revival of the nineteenth century. But, beautiful as much of their work is, it cannot be regarded as reaching great æsthetic heights, and it may be said to be within the reach of almost any competent designer with a command of funds closely to imitate, if not to equal it, nor can it ever be regarded as holding a great place in the Pantheon of Art.

In saying this we should in no sense be regarded as discounting the value of the very useful and interesting book which Miss Jourdain has produced, which covers a style and a period which are now receiving a close and appreciative study. The part of the book dealing with decoration is divided into nine chapters, of which the first is introductory, and gives a general review of the conditions of contemporary life and their effect on design, while the succeeding chapters deal with interior design, sculptors, modellers and designers, materials, decorative painting, chimney-pieces—one of the best

sections of the book—the hall and staircase, door cases and jambs, plaster work, metal work, and the lighting of rooms. The second part of the book, which deals with furniture, contains chapters on its development, materials and methods, furniture and metal work.

In common with all of the books produced by Messrs. Batsford it is well and fully illustrated and the subject is adequately treated without being overdone. Miss Jourdain has the gift of terse description, and the book covers the field chosen fully without the reader being wearied with irrelevant detail.

The greatest claim of work of the period was that it bears the clear impression of the spacious, leisured and cultivated life of which it was the outcome. It is emphatically the art of an aristocracy of comfort rather than that of a nation, and in its calm serenity there is no reflection of the hurry and turmoil of less fortunate ages or of the wants of classes who had not been born to the purple.

GRISAILE MEDALLION OF BACCHUS AND CERES FROM THE HALL CEILING, KENWOOD, *circa* 1767.

[From "English Decoration and Furniture of the Later XVIII Century, 1750-1820."]

The late Sir Ernest George, R.A.

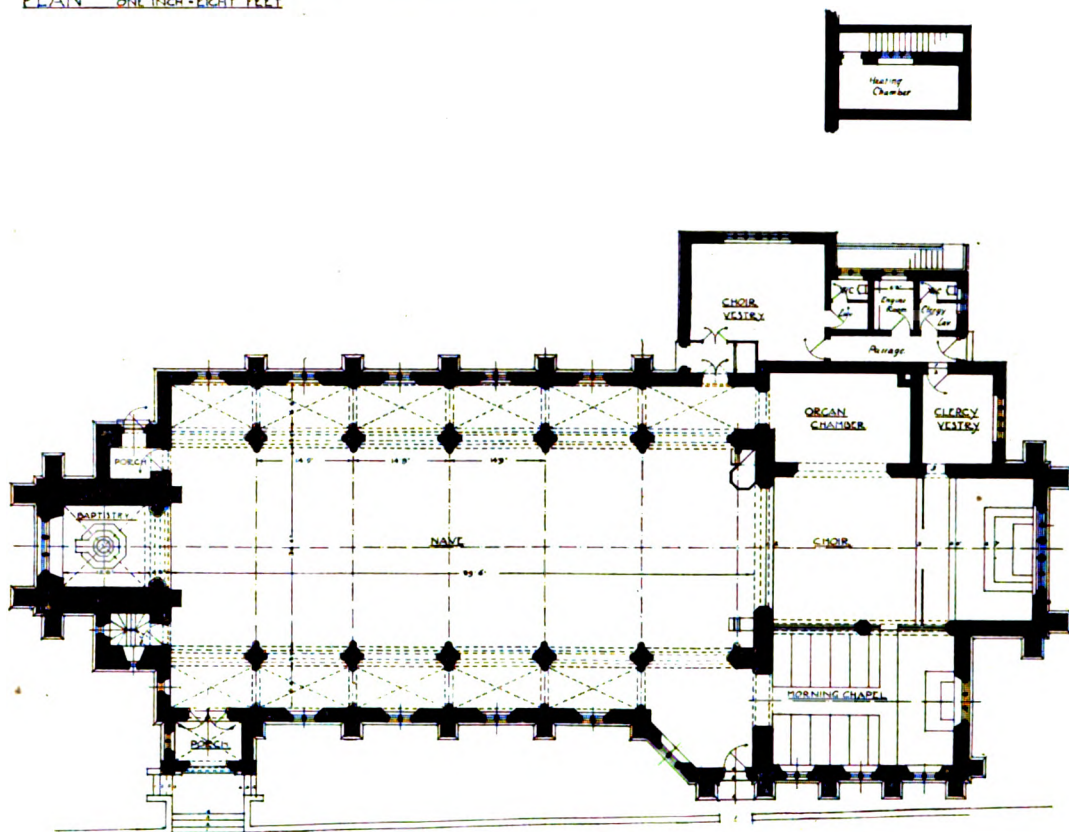
By the greatly regretted death of Sir Ernest George in the fulness of his years and honours the stage of English architecture loses one who for many years was most prominent among his colleagues, and one whose influence on the work of others was perhaps even greater than that produced by his own achievement. When we compare modern English domestic architecture with that of other countries the chief point which we are impressed with is the absence of unnecessary formality and a sureness of touch which is at once a link between the traditions of the past and the wants of modern life. Compared with what it was in mid-Victorian times, it resembles the development of an activity freed from the shackles which confined it and reaching out to and attaining greater achievement. Much of this result is undoubtedly due to the effect of Sir Ernest George's work and the influence he exerted over the minds of the large number of pupils and assistants who were privileged to work with him. During his life he formed three partnerships—with T. Vaughan, then with Harold Peto, and, on his retirement, with Mr. A. B. Yeates. Undoubtedly the zenith of his active professional career was that which synchronised with his association with Harold Peto towards the end of last century. The tendency of the times was towards picturesque expression, and of this Ernest George was a past master. It was the age of the architectural sketcher who wandered in out-of-the-way parts of

England and the Continent searching for inspiration, and George's ability as a watercolourist and etcher would have ensured him independent fame apart from his architectural qualifications. Architects could almost tell what he had been seeing last from the designs he was carrying out. France, Holland, Belgium, and England all supplied him with inspiration, while Italy and Spain occasionally influenced some detail or other of his design. His work is the outcome of a mind revelling in the picturesque aspect of building and alive both to colour and form. His chief works were a long series of country houses, among which may be mentioned Shiplake Court, Motcombe, North Mymms, and Batsford, while in London he carried out houses in Harrington Gardens, Collingham Gardens, Berkeley Square, and many other districts. His institutional and public buildings showed him in a less successful vein, as is evidenced by the block of houses erected from his designs behind the Royal Exchange and the Royal Academy of Music in Marylebone Road. He was, in fact, pre-eminently an architect of romantic, picturesque and playful expression, one whose mind would delight in the quaint conceits of Alexandre Dumas, and was alive to imaginative impulses. He had no mission to preach, no creed to expound, but instead of this he felt to the full the delight of work and the pleasures of a vivid imagination.

HOLY TRINITY CHURCH, JESMOND. Messrs. HOARE & WHEELER, Architects.

Nº 13

HOLY TRINITY JESMOND NEWCASTLE
PLAN ONE INCH = EIGHT FEET



This church stands at the Newcastle City end of Armstrong Bridge, and was opened for public worship on September 24. It is built on the site of a property which was formerly known as Jesmond Park, the residence of Mr. Robert Gurney Hoare.

On his death the chancel and chapel were erected to his memory by the members of his family, and the design was made by his son, Mr. E. B. Hoare, the senior partner of the firm of Messrs. Hoare & Wheeler. This part of the church was consecrated in



THE CHANCEL, HOLY TRINITY CHURCH, JESMOND. HOARE & WHEELER, Architects.

1905. The nave was commenced after the Armistice, and is the thankoffering of a well-known Newcastle shipowner, Mr. R. S. Dalgeish, and his wife and family. In the absence in India of Mr. E. B. Hoare, the scheme was revised by his partner, Mr. Wheeler, on his return from Salonica in March 1919.

Owing to the distance between London and Newcastle, Mr. Wheeler entered into a partnership with Messrs. Hicks and Charlewood, of Newcastle, to assist him in getting out the details and superintending the work, and this arrangement proved entirely successful.

The memorial proper consists of the nave and tower, with the series of windows designed and carried out by Mr. A. K. Nicholson.

The church is built of Northumberland stone, partly Kenton, and partly Windy Nook, in the Gothic style of the fourteenth century, so far as Gothic traditions could be of service.

The aisles are used only as passages, and all the seats are in the nave. The chancel is both lower and less wide than the nave. Vestries and an organ chamber are on the north of the chancel, and on the south side is a chapel to seat 50 people.

The principal entrances are on the south side, the western tower being used for a baptistery. The design of the west end is intended to deal with the problem of the wide nave in a structural manner without losing Gothic proportions. The thrust of the nave arcade is taken by the wall of the flanking gables on the north and south of the tower, which are carried up high enough to stop the main roof and prevent the appearance of a western gable wider than the tower. The tower is roofed by a stone spire which reaches a height of 150 feet.

The arcade departs from the general use of the fourteenth century Gothic in that the arches are semicircular. This form was adopted for two reasons. The first was that it was suitable for the effect desired, and the second that it enabled the building to be kept low. The proportions of the chancel, which was built in 1905, had to be considered as well as the cost of building. A pointed arcade would have called for a greater height to the roof plate or the abandonment of the clerestory.

The chancel arch is semicircular with a carved rood beam and cross at the springing. The east end is panelled in oak with a carved cresting as high as the sill of the east window, and the panelling is brought slightly forward with five recesses, enriched to form a reredos. It is also returned along the north and south walls as far as the communicants' step. In the south wall is a stone credence and piscina. The panelling, reredos, choir stalls, parclose screen, and screen at the entrance to the chapel are all worked in oak.

In the baptistery at the west end is a square font of Barton fossil stone, raised on two steps. The design is simple, owing to the hard nature of the stone. On the font is a high tapered oak cover, richly worked, and hung from the roof by a balance weight.

The church is warmed by a low pressure of hot water system with radiators under the windows. Pipes are carried up to the clerestory to warm the upper stratum of fresh air.

No provision has been made for window opening, but by carefully planned arrangements, frequent changes of air have been provided for.

The radiators are against the outside walls, and are each provided with fresh air inlet ducts for the ingress of warm fresh air, which is regulated by lever and quadrant. There are two auxiliary inlet ducts in the window sills for the admission of entirely cold, or partly warmed, air regulated by special valves or dampers. The positive extraction of the vitiated air is secured by a power electric fan drawing it through a roof duct and discharging it through outlet louvres in the tower. On the opening day, when above 800 persons crowded the church, it was found at the end of a two-hours' service, that the freshness and equable warmth of the air had been fully maintained.

The lights, consisting of electric lamps and reflectors, are all placed on the east side of the tie beams and chancel arch, so that the light is thrown forward, and not shining in the eyes of the congregation. There are a few wall brackets at the west end as well. The roof is constructed of pitch-pine covered with Westmorland green slates. The aisle roofs are of concrete covered with asphalt and ceiled with flat pitch-pine rafters.

The stained glass by Mr. Nicholson is a notable feature. Each of the principal windows in the aisles and morning chapel is dedicated to some branch of His Majesty's service—naval, military and auxiliary. There is also one dedicated to the mercantile marine. The subject of the east window is the "Temple of the Holy Spirit," and its design is based on the Cross, which appears vertically in the centre light and horizontally in the upper part of the side lights.

Messrs. Ralph Hedley, of Newcastle, carried out the following work: oak reredos complete, carving only of chancel panelling, carving only for choir stalls, and stone carving to doorways and

tower. They also made the carved oak pulpit at the time the chancel was built.

The firms who carried out the work are as follows:—

Architects.—Messrs. Hoare & Wheeler, London. Messrs. Hicks & Charlewood, Newcastle.

Builders.—Messrs. J. & W. Lowry, Ltd., Newcastle. Foreman of works, Mr. Harrison.

Stained Glass.—Mr. A. K. Nicholson, London.

Carving.—Stone carving, reredos and panelling, choir stalls, Mr. Ralph Hedley, Newcastle. Screens and rood beam, Mr. Appleby, Newcastle. Font cover, lectern and cross, Mr. W. D. Gough, London.

Font.—Messrs. Beall & Son, Newcastle.

Heating and Ventilation.—Messrs. Henry Walker & Son, Newcastle.

Lighting.—Messrs. Robson & Coleman, Newcastle.

Bronze Fittings and Iron Work.—Messrs. Ramsay & Son, Newcastle.

London Art Galleries.

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At the same time with the exhibition of Masters of Etching, mentioned in these columns last week, the Leicester Galleries are giving an exhibition of the work of a Belgian painter, Leon de Smet. This artist is already known in this country, and some two years ago held a successful display of his paintings and charcoal drawings at the Burlington Galleries, which have since been closed. His work now shown at the Leicester Galleries has the same dominant note of rich and clean colour. As we enter the room this note strikes us at once in a brilliantly handled painting of "Spring Flowers," which sings out in a chord of glad colour.

The work here divides itself into flower paintings, river scenes and landscape, and figures and portrait work. The river subjects are cool, vaporous, gleaming with light in "The River Lys," "September Morning," and "Banks of the Thames," though in this last the very strong greens, possibly of early summer, strike a different note from that delicate pearl grey of the others and of "Fields of Flanders," one of the best here. In the figure subjects the artist shows himself always a superb colourist, with a basis of sound draughtsmanship. Examples are the "Portrait of Miss Buchanan," with the warm tones of the dark velvet dress; the "Interior," with a nude figure of a girl of typically Flemish character, who seems to reappear in "Youth"; and, most of all, the three-quarter length figure simply called "Nude," a colour harmony in which the ivory gold of the flesh forms a true note with the background and the cushions on which the girl is resting. The whole treatment here, especially that of the head and in the eyes and hair, is deliberately archaic, and gives something of the effect of early Greek figure design. Leon de Smet is a great artist, and it is a pleasure to see and study his work, which has been exhibited in all the principal cities of Europe and America, and is appreciated by the Japanese, for there are four of his paintings in the Tokio Museum.

At the Greatorex Galleries an American artist, H. Devitt Welsh, is showing a series of etchings illustrating "The life and death of John Barleycorn," beside etched work by Albany Howarth, E. S. Lumsden, Brantigam Simpson and Winifred Austen. I noticed here particularly "Ruff's Farm," by S. M. Litten, and "Monday Morning," by D. C. Sturges. The watercolours in the inner room include some of Philip Rickman's clever studies of wild bird life—"Mallard Pitching," "Teal," and others—sea-pieces by Napier Hemy, and landscape by Sutton Palmer and Ackermann; on the whole a well-chosen selection of work of merit, but not of first importance.

By the death of Mrs. Asher Wertheimer a magnificent series of Sargent portraits of that family comes to the nation. Mr. Wertheimer, who died in 1918, had made in 1916 the condition to his will that these pictures were reserved to himself and his wife only for their life-time.

The portraits which now come into the possession of our National Gallery are nine in all, dating from 1898 to 1904, the period when J. S. Sargent was doing his finest portrait work. They are all of members of the Wertheimer family,

and include the magnificent portrait of Asher Wertheimer, dated 1898, and different family groups, in which the daughters and sons appear, concluding with the lady who has just passed away, Mrs. Wertheimer, in a black dress, a portrait full of quiet beauty and charm.

I shall take in a later issue the exhibition of Joseph

Pennell's watercolours and etchings, opened at the Fine Art Society on December 7, and of "Modern and Contemporary Painters," opened at the St. George's Gallery the day previous, as well as the memorial exhibition at Walker's Galleries of Lawrence B. Phillips, F.R.A.S., A.R.E. S. B.

Notes and Comments.

The University of Liverpool and an Architectural Degree.

The Court of the University of Liverpool at its recent meeting confirmed the resolutions of the Senate and Council, and thereby established the degree of Master of Architecture, M.Arch., in the University. This degree may be given by the Senate to Bachelors of Architecture of not less than ten years' standing who have erected a building of distinguished merit in their own names. This is the first degree of its kind in any university, English or foreign, and should in the course of time form a distinction of considerable interest to the profession. The establishment of this new degree does not preclude Bachelors of Architecture of the University of Liverpool from proceeding to the ordinary M.A. on the production of a thesis embodying historical or scientific research.

The Manchester City Council and Housing.

The Housing Committee of the Manchester Corporation recommends that the Corporation shall sell land on the Wilbraham Road and Anson estates at £87 10s. per plot of 27 feet frontage and 100 feet deep, free of legal charges and stamp duties, this to cover the cost price of the land and lay-out, and that the Corporation shall guarantee advances to persons for whom houses are erected on this land at a rate of interest not exceeding 5 per cent. In addition to this proposal the Committee suggests that the Corporation shall prepare a scheme under the Housing and Town-planning Act, 1919, to finance private builders in the erection of houses on Corporation estates in cases where the builder is able to introduce a person requiring a house for his own occupation, but who requires financial assistance.

The terms of the suggested scheme are that the market value of the land and building shall be agreed upon before any offer is ratified, and shall in no case exceed £800; that the Corporation shall pay the builder direct in respect of the cost of erection; that upon the agreement to purchase the land being completed an instalment sufficient to cover the value of the land and street works shall be paid by the purchaser; that a further instalment, making in all a sum not less than 20 per cent. of the agreed estimated cost, shall be paid by the purchaser within 14 days after the builder has begun to erect the house; and that the remainder of the purchase money, with interest on the balance as agreed, shall be paid in equal half-yearly instalments within 20 years or such shorter period as may be agreed.

In a report on the proposals of the Housing Committee the Finance Committee points out that, as far as the advances under the Small Dwellings Acquisition Act are concerned, the Corporation have already agreed to advance money under the Act on certain conditions to occupiers of houses built since December 7, 1921.

The Finance Committee points out that, in the case of the scheme under the Housing and Town-planning Act, in the event of a failure to complete the transaction the Corporation will be left with the house and land on their hands. The Finance Committee thinks that the builder should agree, in the event of a purchase not being completed, to take over the house, subject to the Corporation handing over the deposits paid to them. With the above reservation the Committee approves the scheme for the Housing Committee on the following terms: (1) The scheme to be available preferentially to city ratepayers; the maximum advance to be 80 per cent. of the market value; the maximum period of repayment to be 20 years; the rate of interest to

be 5 per cent., and the Corporation to prepare all documents and perform valuations free of charge, but the purchaser to bear any necessary stamp duties.

Manchester has set a good example to other towns by the manner in which it is dealing with its own wants.

The Masonic Memorial.

The United Grand Lodge of England has decided to reject the Adelphi scheme, and to utilise their present site in Great Queen Street, a decision which was apparently arrived at after little opposition. We are inclined to regret, on general grounds, such a decision, as the Masons are in a position which enables them to carry out a fine scheme, and there is no comparison between the architectural merits of the two positions. We may also take it that the Adelphi site must be rebuilt in the near future, and it would be far better to have one fine building there than a number of smaller ones. It is probable that a reluctance to abandon the old headquarters of Freemasonry was a large if not determining element in the decision made, as it has frequently been in other cases. But it would in a large number of instances be politic as well as economical to take a new site, and the determining factor should be the suitability of a site rather than its associations.

Town Councils and Economics.

The Tramways Committee of the Glasgow City Council have approved of a recommendation to accept the tender of an English firm for 4,200 tons of steel rails, though the price quoted is between £4,000 and £5,000 higher than the tenders of Belgian and German firms for the same work. On the other hand, a member of the Hull City Council, when a similar point arose, stated that he "believed if the rails were purchased abroad it would give more employment for Britishers in the mines, on ships, and in the docks than if the order was placed in this country." This shows a curious confusion of mind on the subject of economics, for it is obvious that if we are content to purchase iron and steel goods abroad, the only resultant business done here is the subsidiary matter of handling the goods. Probably the fact that Hull is a port serves to warp the judgment of members of its Council. We are afraid that there is hardly less disposition to use cheap foreign goods instead of our own than was the case before the war familiarised us with the expression "key industries."

The A.A. Play.

The Association play is one of the best things Bedford Square has produced, and those who saw it thoroughly enjoyed both the scenic settings and the histrionic talent displayed. The arrangement by which the scenes of the piece are sandwiched in between fragments of Professor Ratkinley Rilandson's lecture is well thought out and effective. The scenes are themselves very good, especially the two representing prehistoric times and the Roman epoch, in which a toga-clad parody of a great architect, maddened by the President's proposal to take from him the ewe lamb of Delhi, murders him after the manner of Julius Cæsar. We enjoyed the mediæval tournament in which both Institute and Society went down before the prowess of the Assistants' Union, who received the prize of valour from the queen. We were unfortunately not able to stay till the end of the piece, but from what we saw we expected a finale in which the cheers of the audience would wake the dwellers of the neighbourhood from their usual slumbers.

Royal Academy Schools.

The annual distribution of prizes to the students of the Royal Academy of Arts took place on Saturday evening, December 9. The prizes were awarded as follows:—

| | | | |
|--|--|--|---|
| Design in Monochrome for a Figure Picture | (a) The Pool of Bethesda .. (b) "Now when the sun was setting, all they that had any sick with divers diseases brought them unto Him; and He laid His hands on every one of them, and healed them."— <i>St. Luke</i> , iv. 40 | Armitage Prizes, 1st (£30) and Silver Medal 2nd Prize (£10) and Bronze Medal | CONSTANCE EMILY EDITH GRANT. <i>Not awarded.</i> |
| Landscape Painting .. | A Country Road | Creswick Prize (£25) and Silver Medal | <i>Not awarded.</i> |
| Design for the Decoration of a Portion of a Public Building | The Arts | 1st Prize (£30) and Silver Medal 2nd Prize (£10) and Bronze Medal | REGINALD LEWIS. CONSTANCE EMILY EDITH GRANT. |
| Composition in Colour .. | .. .. | Prize (£10) and Silver Medal .. | BARBARA CAYLEY ROBINSON. |
| Set of Four Drawings of a Figure from the Life | .. .. | 1st Prize (£15) and Silver Medal 2nd Prize (£10) and Bronze Medal | ELEANOR BARBARA GEORGINA SHIFFNER. KATHLEEN MARY HORNUNG. |
| Two Paintings of a Figure from the Life | .. .. | 1st Prize (£10) and Silver Medal 2nd Prize, Bronze Medal .. | MARGARET MAITLAND HOWARD. ELEANOR BARBARA GEORGINA SHIFFNER. |
| Cartoon of a Draped Figure | A Suppliant | Prize (£25) and Silver Medal .. | MARGARET MAITLAND HOWARD. |
| Portrait Study of a Lady in Evening Dress showing Arms and Hands | .. .. | Arthur Hacker Prize (£30) and Silver Medal | CONSTANCE EMILY EDITH GRANT. |
| Painting of a Head from the Life, Life Size .. | .. .. | Arthur Hacker Prize (£20) and Silver Medal | VIOLET MURIEL BABER MIMPRISS. |
| Set of Three Studies of Drapery | .. .. | Silver Medal | MARGARET MAITLAND HOWARD. |
| Drawing from the Antique | .. .. | Prize (£5) and Silver Medal .. | <i>Not awarded.</i> |
| Painting from Still Life.. | .. .. | Prize (£5) and Silver Medal .. | MARGARET MAITLAND HOWARD. |
| Perspective Drawing in Outline (open to Painters and Sculptors only) | The Entrance Hall of the Royal Academy from the East End | Prize (£5) and Silver Medal .. | <i>No Competition.</i> |
| Two Models of a Bust from the Life | .. .. | 1st Prize, Silver Medal .. 2nd Prize, Bronze Medal .. | DAPHNE MAYO. DAVID EVANS. |
| Set of Three Models of a Figure from the Life | .. .. | 1st Prize (£15) and Silver Medal 2nd Prize (£10) and Bronze Medal | DAPHNE MAYO. DAVID EVANS. |
| Model of a Design .. | "Aquarius": a Fountain .. | Edward Stott 1st Prize (£50) and Silver Medal Edward Stott 2nd Prize (£20) and Bronze Medal | <i>Not awarded.</i> DAVID EVANS. |
| Model from the Antique.. | .. .. | Prize (£5) and Silver Medal .. | <i>No Competition.</i> |
| Model for a Medal or Coin | The Visit of H.R.H. The Prince of Wales to India | Prize (£5) and Silver Medal .. | <i>No Competition.</i> |
| Design in Architecture .. | A Memorial Chapel | Travelling Studentship (England) (£60) Tenable for one year .. | JOHN OLIVER BROOK HITCH. |
| Set of Architectural Drawings | The Lion Gate, Hampton Court | 1st Prize, Silver Medal .. 2nd Prize, Bronze Medal .. | RICHARD GEORGE COX. <i>Not awarded.</i> |
| An Architectural Design.. | .. .. | Prize (£20) and Silver Medal .. | ROMILLY BERNARD CRAZE. |
| An Architectural Design (First Term Students only) | .. .. | 1st Prize (£15) and Silver Medal 2nd Prize (£10) and Bronze Medal | SYDNEY HAROLD LOWETH. <i>Not awarded.</i> |
| Perspective Drawing in Outline (open to Architects only) | The Lion Gate, Hampton Court | Silver Medal | <i>No Competition.</i> |
| An Original Composition in Ornament (Architects only) | .. .. | Prize (£5) and Silver Medal .. | <i>No Competition.</i> |

Landseer Scholarships in Painting and Sculpture, of £40 a year each, tenable for two years, have been awarded—in *Painting* to LESLIE J. G. SMITH and LILIAN J. MINARD; in *Sculpture* to DAVID EVANS.

Sir Aston Webb, the President, in the course of his address said it was the general opinion of those who had examined the work that the studies from the life were many of them good, but he would give a warning against drawing fragments, though he understood there were two excuses for it: First, because of the lack of time for more; and, second, because of a desire to experiment in expression; but otherwise it was merely shirking difficulties.

The studies of drapery were also good, though not perhaps quite up to the level of last year.

The drawings from the antique showed study and careful drawing, but in making these the student should continue until satisfied that in tone and construction nothing was left incomplete.

In landscape painting and composition there was still much to be learnt.

Composition was perhaps the study requiring the most extensive knowledge and skill, and here again the students had also much to learn in the arriving at the right scale, proportion, form, and colour in which to depict the subject; but as this was the most difficult of all to learn, so it was also the most important, for without it other qualities—beautiful in themselves—would be entirely thrown away.

Though the sculpture is small in quantity it is high in quality.

"The architecture," continued Sir Aston, "makes a good show when it is remembered that it is only an evening school, and the students work there after a long day's work in the office."

"Here, again, the power of expressing in a building the purpose to which it is put is, of course, the main aesthetic object to be aimed at in designing a building; to think of it as a whole, apart from its detail, should be the first aim of an architect, and this should be thought of both in its plan and elevation."

"The designs for a memorial chapel are good, though the author of one appears to have a difficulty in deciding whether he intended to crown his building with a dome or a tower."

"There is only one measured drawing of old work which is good, but we should like to see more."

"The improvement visible in design, shown on comparing the work of first year men with that of second and third year men, is, I think, very gratifying, and should be an encouragement to the visitors and Mr. de Gruchy, the master."

"There is almost yearly an opinion expressed that painters and sculptors would benefit by a time spent in the architectural school. I think there can be no doubt of this. And also that architects should spend some time with the sculptors."

"When I visited the Architectural School this year I found two painter students there—one a lady—and both seemed greatly interested in what they learnt."

"In connection with the prize for sculpture in connection with architecture, Sir Reginald Blomfield met the students and gave them some practical hints on the architectural side of the problem, which, I am sure, will be useful."

It was very useful once a year, on such an occasion as this, to ask oneself what progress had been made in the last twelve months by putting one's work of to-day and of last year side by side and noting the difference.

Next January an Exhibition of Mural Painting will be held at Burlington House, which should be of special interest to students, for, if it succeeds, it offers opportunities to young men and women of working under a master on practical work which must always appeal to the young artist. Mural decoration did not mean painting pictures in panels and leaving the surrounding walls untouched. Mural decoration entailed a knowledge of painting and much sympathy with the architecture it is called in to decorate, though unfortunately there had come to be an idea that the artist does the pictures, and the man who treats the walls and surrounding architecture is called the decorator—another subdivision which has certainly not led to the production of works of art complete in themselves.

Often in these days an architect erects a building, a sculptor is called in independently for certain work, and a firm of "decorators" is given a free hand to do the rest. They may be instructed to leave certain plain spaces which may or may not be filled, and, if they are filled, very likely by painters who have no sympathy whatever with the work they are called upon to decorate. How could such a system lead to anything but confusion? Not that any one man could carry out such work unaided. It is part of the charm that it entails what has been called community of toil, but there should surely be one controlling mind over the various branches of art employed to ensure a complete and harmonious work of art.

This division of the art of mural decoration into what is known as painting and decoration had had the unfortunate result that the painter is sometimes apt to look down upon decoration as rather beneath him, whereas it is surely of almost equal importance with the painted panel and the one on which the main result will largely depend.

It was in this art of decorative painting that a great opportunity

for students lies. The master mind prepares the general scheme, but requires many busy brains and hands to carry out under his constant advice and encouragement. What training could possibly be more advantageous than this. The student will soon find a study of architecture indispensable to him. He will soon learn that the colouring must extend beyond the limits of the picture to the walls if it is to become truly decorative, that mass is more important than detail, and that composition, proportion, colour, and form are all dependent one on the other if a complete whole is to be obtained.

He will find much to excite his adventurous spirit in the filling of spaces, which at first seem impossible of satisfactory treatment, and he will learn that these restrictions and difficulties will finally lead him to a better treatment than a plain field which presents no special opportunities for his invention and ingenuity. He will have the opportunity of painting not only on vertical walls but on horizontal ceilings and domes, he will learn the right treatment of surface and contour for these, and he will have the use of gold, which has long been practically given up in easel pictures. In the right use of gold and gilding he will find much to learn: that it is most effective on curved surfaces and constructive features, and should be used boldly and simply, and not frittered away on details.

With regard to the future, two great buildings have recently been opened—the County Hall and the Port of London Authority's building—in the former of which R.A. students are now having their opportunity. Then there is the vast British Empire Exhibition building now slowly rising, and numerous town halls, churches, halls, and schools, whose dull, blank walls call for the painter's art.

He (Sir Aston) hoped that the Exhibition in January may call the attention of the municipal authorities throughout the country to the talent available for beautifying these buildings, and for recording on their walls in a beautiful and permanent way the history and association of their country, giving an expression of the life and times in which it is painted.

It is often argued that wall decoration is unsuitable for the English climate. If done in fresco or tempora this may be true. Wall frescoes in St. James-the-Less faded away and had to be replaced, but it is very permanent if executed in oil with ordinary care. The great Verrio in the hall of Christ's Hospital, in Newgate Street, 80 feet long, representing Charles II. presenting the prizes to the boys, when the school was taken down after a life of nearly 300 years, and after being washed and relined, came out as good as new, and was re-erected at Horsham.

Forthcoming Events.

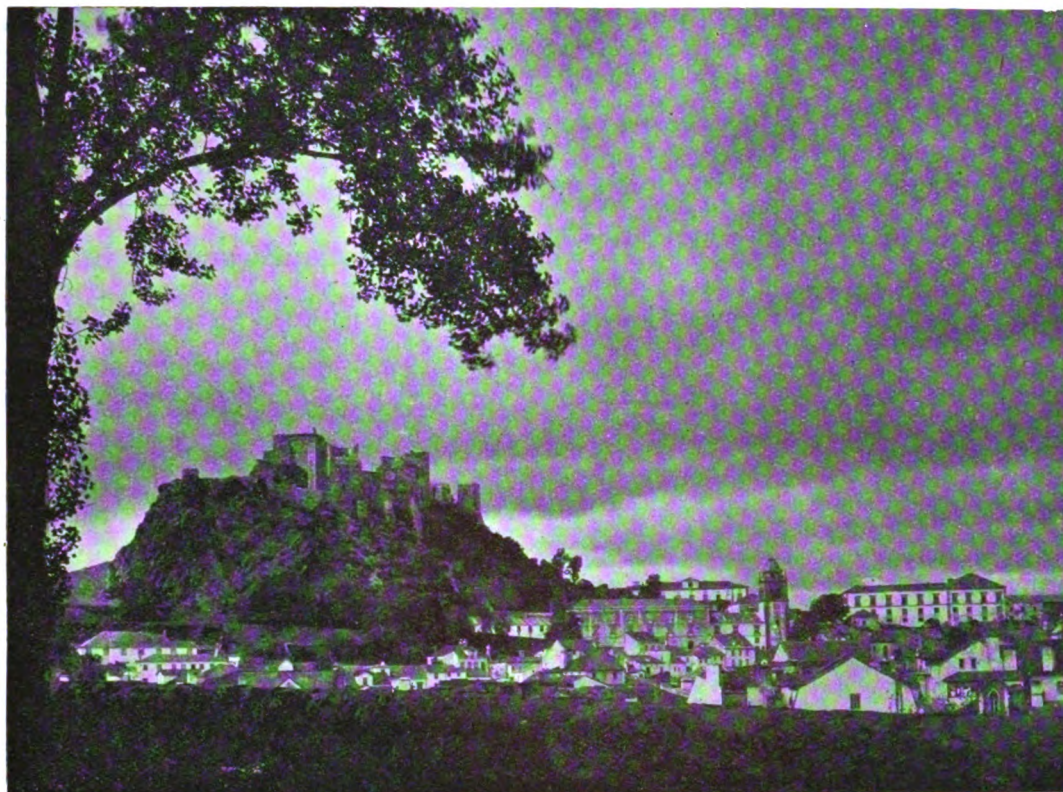
Friday, December 15.—Architectural Association, Lyric Club "An Architectural Revue," at 34-35 Bedford Square, W.C. 2.30 p.m. and 8 p.m.

Monday, December 18.—Royal Institute of British Architects Meeting at 9 Conduit Street, W. Paper by Mr. A. M. C. Shelley, M.A., B.C.L., entitled "The Law of Building Outside London." 8 p.m.

Tuesday, December 19.—Institution of Civil Engineers. Meeting at Great George Street, Westminster. Paper by Mr. F. M. G. Du-Plat-Taylor, M.Inst.C.E., entitled "Extensions at Tilbury Docks, 1912-1917." 6 p.m.



BENCH END, HOLY TRINITY CHURCH, JESMOND.
Messrs. HOARE AND WHEELER, Architects.



THE CASTLE, LEIRIA.

Notes from Portugal.

By G. A. T. MIDDLETON.

No. VIII.—Leiria.

Leiria is a small town in central Portugal, rarely visited on account of its inaccessibility, and then generally only as a centre from which to make excursions to other places which are even more difficult to reach. Yet it possesses a few points of at least minor architectural interest, in addition to its characteristic picturesqueness, huddling at the foot of an isolated granite hill—the cone of an extinct volcano—on which there are the ruined walls of a castle. It is said

to have been occupied by Sertorius as far back as 75 B.C., and to have been the seat of the Roman government during the time that Lusitania was under their dominion; but there are no Roman remains, nor do the castle ruins give indication of unusual antiquity, beyond what is common in other parts of Europe.

The most interesting fragment, in fact, is a small dismantled church just outside the castle walls, of obvious



CHURCH OF S. CHRISTINO, LEIRIA.



CHANCEL OF DISMANTLED CHURCH, LEIRIA.

twelfth-century origin, and as obviously built under French influence, if one may judge by the heavy roll mouldings of the semicircular arches and the details of the capitals. But careful study reveals unusual peculiarities. For instance, there are no indications whatever of there ever having been a nave arcade. The roof, now gone, was of a single span, originally low pitched and subsequently raised to a steeper incline; yet the chancel is flanked on either side by parallel rectangular chapels, such as would naturally terminate side aisles. All three are barrel vaulted; but while the chapels are square-ended, the chancel itself terminates in a semi-domed apse, from which it is separated by a plain arch carried on shafts, similar to those of the chancel arch.

The lighting of these three recesses must always have been poor, for each has one small semicircular-headed window only at its eastern extremity.

Two similar small plain windows occur over the entrances to the side chapels, but not centrally over the openings, and in each case the head, though semicircular in form, is cut out of a single stone; but the window above the chancel arch is circular, fully moulded, and of voussor construction.

The equally dismantled chapel of the castle itself is worth comparing with the small church outside the gates, though it is not so old. It as clearly belongs to the thir-



BELFRY TOWER, LEIRIA.

teenth as the church does to the twelfth century, and its chancel, even in its present dilapidated state, is a gem of perfect proportioning. Its semi-octagonal apse, its windows, and even the square abaci are French, of the very purest; but the arch mouldings are more delicate than those usually found in France, though nothing more than rounded bowtels, and the skill with which a hood-moulding is suggested, though actually there is none, is worthy of note, and perhaps of imitation. But its beauty depends upon proportion mainly, and this no words can describe.

Besides this chapel there is nothing of architectural merit in the castle, though an antiquarian might find interest in tracing the dates and uses of the various parts; and in the town, with the exception of a few accidentally picturesque house groups in the streets, there is little except the belfry tower and the church of S. Christino. Both of these have the appearance of late seventeenth-century curiosities, but what is now to be seen is probably but a mask applied to an earlier structure. The towers in both are similar, with the bells slung in the openings and not upon a staging, and terminate in grotesque spires, somewhat suggestive of those frequently met with in the Ardennes, but better proportioned. They cannot be said to possess grace, but at the same time are not ill suited to their positions.

The windows of the church of S. Christino also are not unpleasing, perhaps because they are unpretentious and

well set in the white walls, but the most curious feature of the west façade is the pediment, double-curved like an ogival arch—an arrangement by no means so unhappy as it sounds. Somehow, out of incongruous material, the architect has succeeded, in this front, in obtaining what is by no means an unpleasing result.

St. Paul's and its Builder.

Canon Alexander, treasurer of St. Paul's, gave an address on "St. Paul's and its Builder" at a midday service at St. Dunstan's-in-the-East last week.

He said that while Christopher Wren, the bicentenary of whose death was to be celebrated next February, was engaged on the very complex task of restoring the old St. Paul's, fortune gave him the golden opportunity, which had seldom fallen to any man's lot, of replacing one of the noblest buildings in Europe with a successor which should be not unworthy, in either a religious or an artistic sense, of sustaining a great tradition. It might well be that, in building as he did, Wren accepted some of the risks which usually attend the course of creative genius, and certainly we ought to try to understand the conditions under which he worked and the difficulties which he had to face.

As Wren surveyed the wilderness of St. Paul's Churchyard after the Great Fire, there was one thought which rose in his mind as the master-thought of all his dreams. It was that of a Dome. He must have a Dome. The Dome would be not only the central fact in the landscape of London—of the new London as he planned it; it would also make possible great acts of public worship. Wren was a religious man—a democrat, if one may so say, in religion; the mediæval type of Cathedral had never been congenial to him; he would build for a multitude, or he would not build at all. Like Colet, greatest of the Deans of St. Paul's, he had a tender heart for the common people. So the Dome soared over the City, more beautiful than any that Florence, Rome, or Paris had seen; and yet, even then, its builder's purposes were thwarted. Not for a century and a half was his vision of a great multitude worshipping week by week beneath the Dome to find its realisation.

Canon Alexander proceeded:—It is one of the latest theories of the experts that, for financial or other reasons which are not clear to us, Wren's plan of construction was modified after the work began. The lines of the old foundations had to be avoided; the soil presented special problems—as our committee lately told us, "the ground would not be considered altogether satisfactory at the present time for a building of this character"; and as a result the Dome settled nearly 6 inches towards the south-west, the great piers sank, the weights were unevenly distributed, and the south-west pier (which we have now practically rebuilt, and which is stronger than it ever was before) was badly shattered, and had to be repaired by Wren himself. The foundations of this immense structure are only 4½ feet below the level of the crypt floor. Beneath the strip of earth on which they rest there lies a bed of sand and gravel, with the blue London clay far below. We are assured that there need be no special anxiety about the foundations at present; but Wren, of course, could not have foreseen that the time would come when, as in 1831, great quantities of sand would be pumped out from beneath the Cathedral with a view to constructing a deep sewer near the south porch. He could not have foreseen the elaborate drainage system of modern times; the vibration of motor traffic, with an effect upon the building which is still a matter of dispute between the theoretical physicist and the practical architect and engineer; the atmosphere of modern London, destructive alike of stone and of metal; or the risk of his foundations being undermined not only by the tunnels of tube railways but even by the basements of neighbouring warehouses. To one danger indeed, which we think he might have foreseen, he does not appear to have given sufficient thought, and that was the peril of rusting iron. He made a note somewhere that iron should not be employed within 9 inches of the air; yet we have found it largely used throughout the building, and with disastrous results.

It has to be remembered, also, that Wren, compelled to convey his Portland stone by sea, found the greatest difficulty in maintaining a regular and adequate supply; had it been otherwise, the Dome might have stood unshaken; as it was, his great piers were filled with rubble, and the Portland stone on their surface is in places but a few inches deep. And, as he was curtailed for material, so he was continuously handicapped by want of means. The cost of such a cathedral was immense, and, in spite of Sancroft's assumption that "money will be had to accomplish it," funds came in but slowly. Wren himself contributed the sum, not inconsiderable for those days, of £60. His committee did not help him greatly; it was critical and

venacious, and as unimaginative as committees generally were and are. He was accused of shirking his duty and of wasting time. In the end he was expelled from his office as Surveyor of Public Works. At the present day it may comfort us a little to learn that the appointment of his successor was regarded as due to "German intrigue."

But the old man was not dissatisfied. In the face of much adversity he had built his Dome more or less according to the pattern shown to him in the mount. Ours is the lesser, but still serious, task of preserving what he created. "Parentalia" (now a somewhat discredited authority) tells us that he aimed at building for eternity; he is also said to have prophesied that his work would last for two hundred years. After two hundred years the Cathedral still stands in massive strength—perhaps, a little like some ancient tower which the encroaching sea-waves threaten to undermine. Our purpose is to take no avoidable risks with such a dome as ours, nor to bequeath to another generation a task which, through carelessness or negligence or want of generosity or courage, might soon have become impossible. We are thinking not of to-morrow, but of the years to come.

I once suggested that a memorial to Christopher Wren should be placed somewhere in the City, on which his genius has left so deep a mark; and a friend guaranteed a princely sum sufficient to carry out the design on a noble scale, so that the people might know how great a man had walked their streets. Then came the war; and the structural needs of the fabric loomed so large that it seemed unfitting to divert time and money and effort to something purely ornamental. The best memorial of Wren is still the Dome, which lifts its misty splendours above the curves of the river, with the Cross shining back to the setting sun. As, in a quiet corner of the crypt, we read once more the epitaph above his unpretentious grave, we repeat with pride and contentment the familiar words, "*Si monumentum requiris, circumspice.*"

Correspondence.

London Street Improvements.

To the Editor of THE ARCHITECT.

SIR,—On September 24, 1920, you very kindly inserted a letter of mine in your paper with reference to the traffic in London. As it is still in a very congested state, and likely to remain so at present, I venture to add a few more observations on that very important question, which I hope will meet with your approval. Regent Street is now being reconstructed, and the London County Council are to be congratulated in the improved new buildings lately erected. In order to complete this scheme in a satisfactory way it is absolutely necessary that a plan of the streets radiating from Regent Street from west to east should be made in the direction of Kingsway, so as to lessen the traffic of the Strand and Oxford Street. For instance, the width of Conduit Street being about 70 feet, in order to extend that fine street on the opposite side the old street Foubert's Place, the width of which is only about 20 feet, ought naturally to be pulled down. Great Marlborough Street has recently been taken in hand, and no doubt the London County Council, when the leases fall in, will remove Argyll Place and continue the street farther east. There are other streets which might be extended in a similar way, such as Beak Street and Brewer Street, near the Quadrant. Should these schemes be carried out the traffic would undoubtedly be much improved. It is a pity that Grosvenor Street was not continued across Bond Street years ago to St. George's Church (which is now hidden). Maddox Street was badly planned about that time. New Burlington Street might have been continued on the opposite side lately by slightly reducing the façade of Robinson & Cleaver's premises, but that is now quite out of the question. It is a pity that Queen Anne's Gate was not extended towards the Victoria Tower. Two huge buildings have recently been put up, obstructing that view which might have been so beautiful. Who is to blame for this oversight—the First Commissioner of Works or the London County Council? It is to be hoped that the temporary wooden additions to the upper part of the Admiralty and various other buildings will be speedily removed, and that the Council will not sanction the erection of skyscrapers in London. If existing buildings could be raised where practicable by adding a floor or floors to the upper part of them, that would be a far better solution of that problem. Such alteration was recently carried out at the Junior United Service Club in Regent Street. Hoping that the Council will forgive me in making these observations.—Yours, etc.,

C. L. R.

The R.I.B.A. Exhibition.

To the Editor of THE ARCHITECT.

SIR,—With a great flourish of trumpets an announcement has been made of an exhibition of Contemporary British Architecture at the Institute. I have seen in the technical journals a list of the celebrities who were present at a private view.

This is most interesting reading, and doubtless worthy members of our Council were present in force to bask in the sunshine.

Remembering how one was circularised by the present Council, when seeking election, and the "great stand" they made for the younger members, I was astonished to find on visiting the Institute about 6 o'clock on Wednesday evening, with a view to seeing the exhibition, that the door was closed, I being informed by the commissioner (still on duty) that the exhibition closed at 5 o'clock.

Do the Council realise that younger members of the profession have to work during the day?

Possibly the exhibition is not for members of the profession; but, if not, why on earth is it advertised in the technical journals?

At the present time the Council are asking architects to bring before the members of their staff the advantages of working for the Institute examinations and becoming members.

How "cheap" a chief would look, after having interested his staff, at the following:—

Assistant: "Oh, sir, I went to the Institute last night to see the exhibition."

Chief: "Yes, —, what did you think of it?"

Assistant: "Well, sir, the exhibition was closed. I understand that it closes daily at 5 o'clock."

Chief: "Oh, I am sorry to hear that; but never mind, Professor — is reading a paper next Wednesday evening on 'The Destruction of Timber by White Ants,' which I am sure will be most interesting and better than an exhibition of Contemporary British Architecture."

I am sure that others must feel strongly on this matter. Full reports are published in the technical papers of all papers read at meetings, but an exhibition of drawings can only be seen by a visit, and assistants should not be barred from this pleasure.

DISGUSTED ASSOCIATE.

[We think our correspondent is right as to the advisability of keeping the exhibition open till a later hour, but surely he has hung a great weight of animus on a very slender thread of legitimate complaint.—We have since learnt from the R.I.B.A. that it has been arranged to keep the Exhibition open till 6 p.m. except on Saturdays.—ED.]

Re Registration of Architects.

To the Editor of THE ARCHITECT.

SIR,—I should like to suggest through the medium of your columns, that in view of the R.I.B.A.'s proposal to bring before Parliament a Bill for the Registration of Architects, it would help matters considerably if each architect were to approach his member of Parliament with a view to obtaining his support for the above.—Yours faithfully,

S. H. LOWETH.

The Doncaster Town Council on the 6th inst. confirmed tenders for the erection of 20 houses on the Carr House Road site by Mr. J. H. Elsom, of Doncaster, for £7,816, and of 54 houses on the same site by Messrs. Forsdike, Ltd., of Sheffield—12 for £3,900, four for £1,358, 12 for £3,942, 10 for £4,140, and 16 for £6,352.

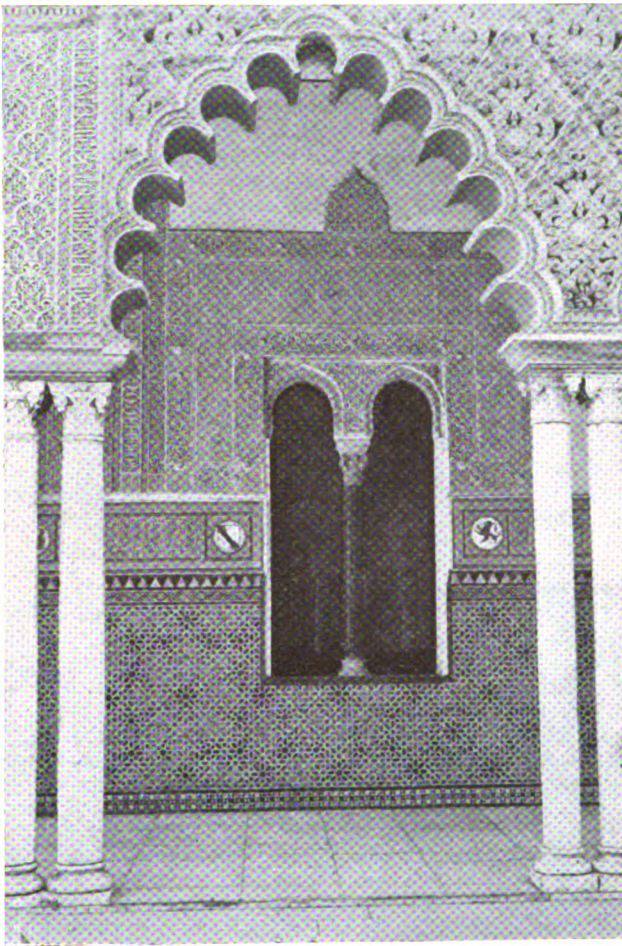
The Salford Town Council are to apply to the Ministry of Health for sanction to borrow £21,285 required for extensions at their Ladywell Sanatorium. The Council also desire sanction to borrow £104,546 to cover the difference between the estimated cost of completion of the extensions and other works now in hand at the Sewage Works and the amount already approved by the Council.

At a meeting of the Manchester City Council on the 6th inst., a proposal that a donation of ten guineas should be paid to the Manchester, Salford, and District Building Trade Employers' Association "in recognition of the many services rendered to the Corporation by the Association" was defeated on the ground that it would establish a bad principle. Other bodies, like trade unions, which performed similar services would, it was argued, expect to be subsidised in the same way.

The Stafford Town Council have approved a scheme under which the tenants of the municipal houses might become the owners. This scheme authorises arrangements with the Council for the mortgage of the houses, and for repayment by monthly or weekly instalments spread over 15, 20, or 25 years. The purchaser would be required to make an immediate cash payment on completion of the purchase of at least £20 to £50, according to the time arranged for repayment.

Do It With Tiles.

By Francis Moulton.



TILED DADO IN HALL OF SAN FERNANDO, ALCAZA.

The tile idea has got beyond the bath-room idea. Their use has penetrated shops, theatres, living apartments and hotels, and has even been adopted as exterior wall covering, or revetment, for all manner of modern edifices, from churches to railway stations, not always with just appropriateness, it is true, but always as a result of honest, sincere effort towards an economic gain.

In London, Berlin, Paris, Vienna and New York the vogue is growing day by day, largely in their use on a big scale interpolation, but there is no reason why the individual house designer and builder might not insert here and there a passing whiff of this very decorative and cleanly constructive element in a scattered rather than a continuous profusion.

Italy has adopted and adapted the old Roman brick and tile vogue, though, for the most part, Italian decorators have imitated the Venetian mosaic glass or other mosaic—which is but a step aloof, in effect at least, from the tile idea.

France, more deeply grooved in tradition, though no less profoundly steeped in ancient lore, has made a lesser use of tile, but before the war even it had begun to make its impress and lend its unusually brilliant note of colour, above all in the south of France, along the shores of the Mediterranean, as indeed through the Mediterranean countries, in the shape of the rich red hexagon and octagon floor tiles, or *moellons*, as a super hygienic floor covering.

Once again, as in most things, we have to go back to China for the real impetus first given to porcelain tiles as an accessory of the living room. But it is in Spain that the most celebrated of porcelain apartments, so to call them, came into being—porcelain tiles, medallions, lozenges and panels, floors, walls and ceilings.

The most remarkable example is that of the Buen Retiro at Madrid, to which may be coupled the famous

apartment in the Palace of Aranjuez. Both were the result of a notable Spanish revival of what may be called “architectural porcelain” in the eighteenth century. Charles III, King of the Two Sicilies—then reigning monarch of Spain—installed fifty artisans in what was virtually a royal porcelain factory at Madrid, and the finest possible results were soon achieved in the production of porcelain plaques or tiles, in white, gold and colours, the final disposition of this entire product being for the use of the royal apartments of the king and his court.

The ideal use of the tile is found in what is accepted as the classic Moorish house, as seen to-day throughout North Africa, in most cases but little departed from the ancient and mediæval models of which the present may be a copy. The French Residency at Algiers is an example of this, a better one being the various Sherifian palaces of Morocco. Almost any legitimately described Moorish house, whether it be mediæval or modern, will display the typic characteristics almost invariably pure.

Perhaps the chief characteristics are the floors and walls, the revetment, often including the ceiling, of these constructive details, so to say. Unlimited possibilities are offered for the use of tiles, *carrelages* or *moellons* (Fr.); *tejas* or *baldosas* (Sp.). Above all is this first expressed in the *patio*, usually a fountained courtyard which serves in a way as a general living room. All lines which strike the eye are rectangular, horizontal, perpendicular or diagonal, lines to which tiles in geometrical forms alone lend themselves with symmetry, though abjuring the curved line. In combination, as they often are, with marble, stucco or porphyry, these enamelled faïences, which they virtually are, form a unique decorative form of architectural expression. The effect of to-day is best seen in Spain, where the best and most modern tiles are commercially produced.

Following the inspiration of the 10-inch tiles of the Mecca Wall of the Agha Mosque at Cairo, a conventionalized lotus conception as to design, the Moors of the Western Moghreb, as they overran Spain, brought with them the wall tile idea as expressed by the fourteenth century Hispano-Mauresque *azulejos* which showed a *finesse* of detailed interlacings of geometrical patterns and were used largely for band friezes, often carrying fire-painted inscriptions.

At a later time Italian pottery workers were brought to Spain, and, with a brake put upon their natural inventiveness, set to work producing pseudo-Moorish tiles after the same methods as employed by the original workers, preserving the crude Berber *motifs* and inundating the country with their product.

What may be liberally accepted as Hispano-Mauresque tiles may be readily divided into three classes of product, the one and the other, even by experts, often confused as to origin and genuineness:—

(a) Those made by the Moors for their own use.

(b) Those made for their Christian Conquerors.

(c) Those made by Spanish or Italian potters in Spain after avowed Moorish designs.

Unquestionably the Majolica tiles from the Spanish islands of the Baleares, which had already travelled as far afield as Siena in Italy, had a big influence upon the diffusion of the tile in Spain and indeed throughout the Mediterranean at the beginning of the sixteenth century, but the Moorish tile was something which antedated this by more than two centuries.

It is for this reason that the tile which decorated the Moslem and Arab house, mosque and fountain courtyard, gave the predominant Moorish influence to what has become artistically and commercially recognised as the distinctively Spanish tile of to-day, as of yesterday.

It is in Spain that the tile and its use reaches, and has always reached, its supreme height, a legacy of the Moors of Fez and Morocco City, whose descendants to-day still

THE ARCHITECT, DECEMBER 15th, 1922.



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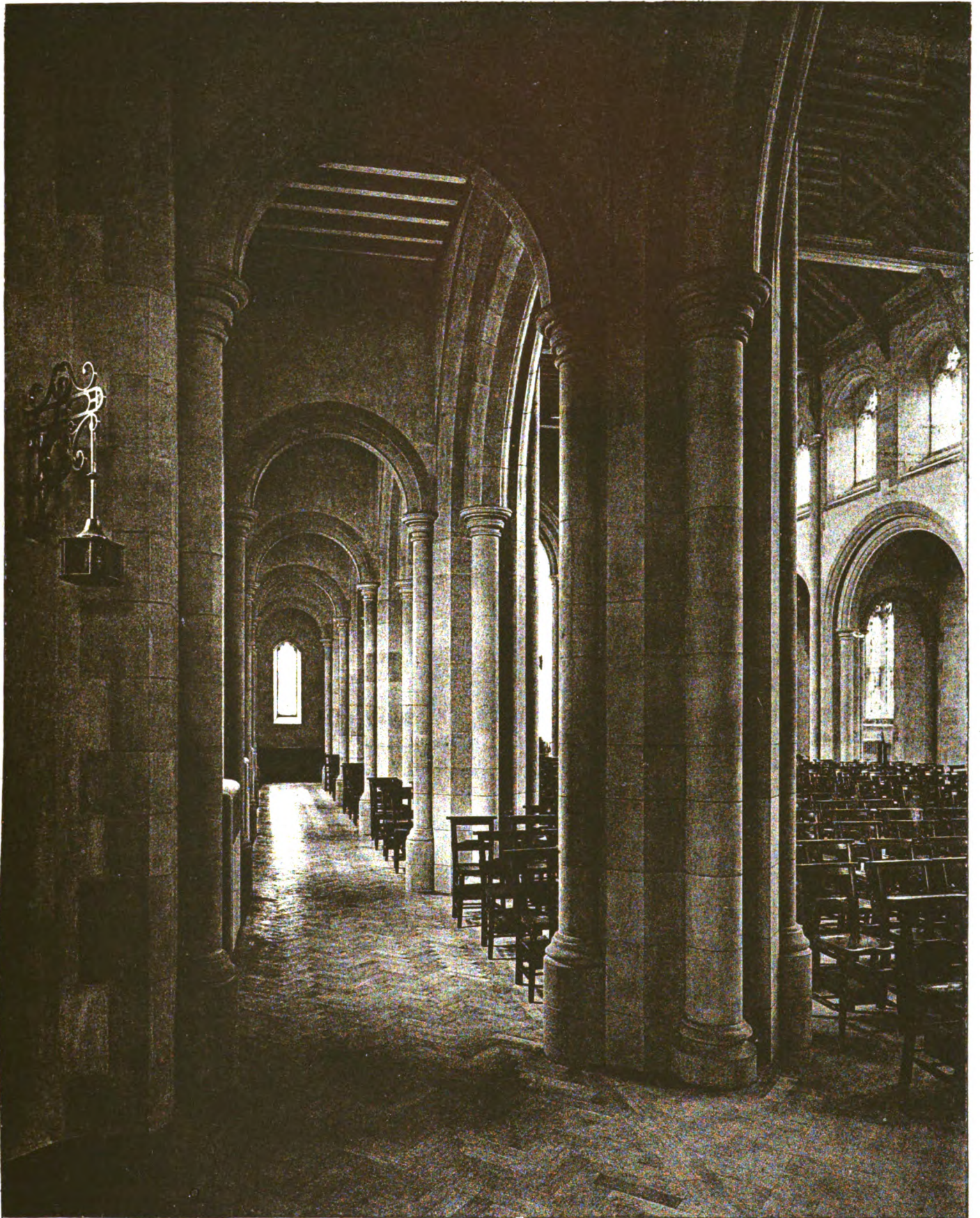
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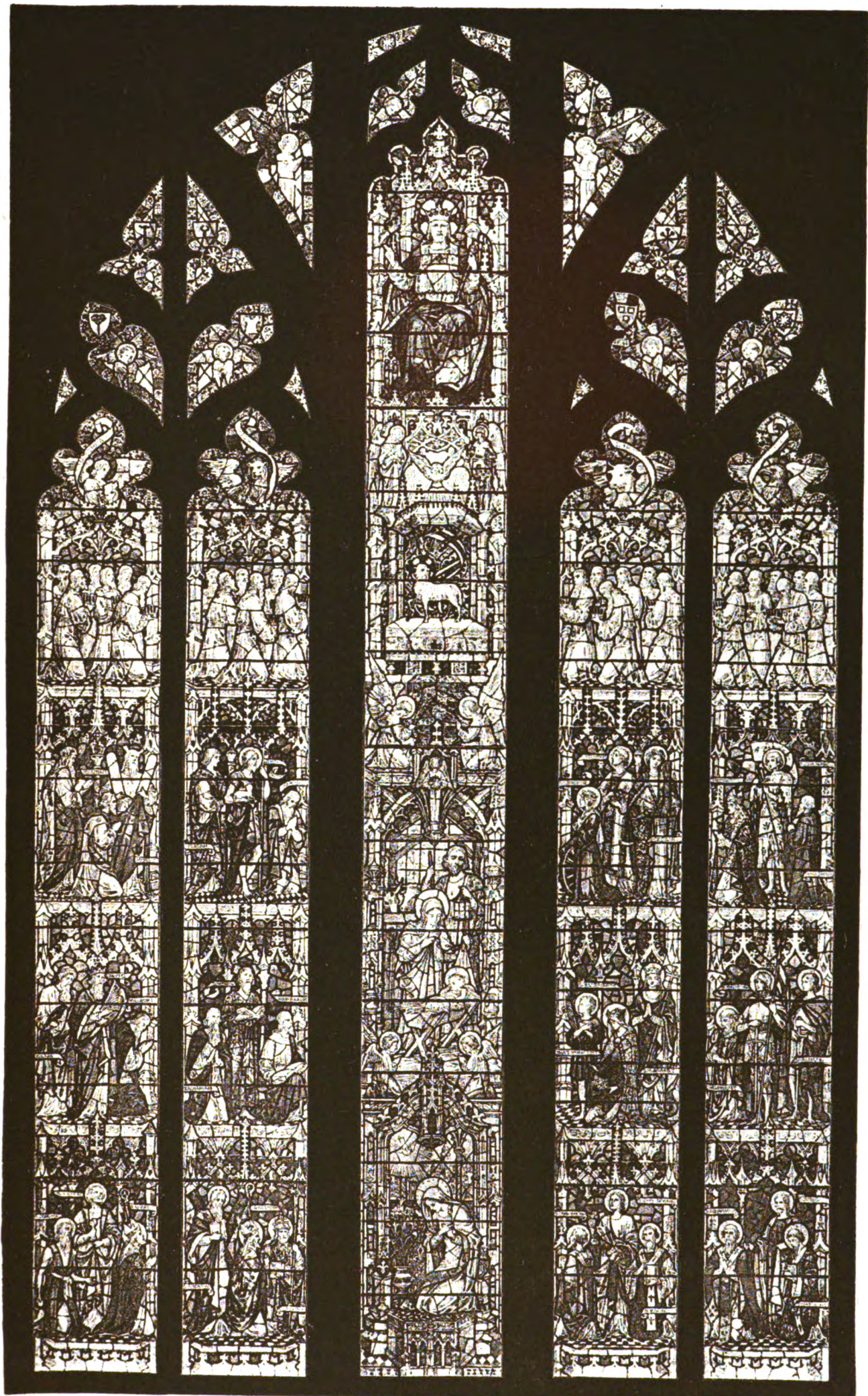
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EAST WINDOW.

guard the keys of their houses at Cordoba and Grenada expecting someday to reintegrate themselves therein.

Spanish architecture in all its phasse is most complicated, less nearly pure than that of most other European countries, whatever be the epoch, but the tile through all ages has never been a modest, half-hidden accessory; always it has been in evidence, even in the Gothic era, which the Spaniards wrongfully call *Tedesco*, for the reason that they believe it as of German origin.

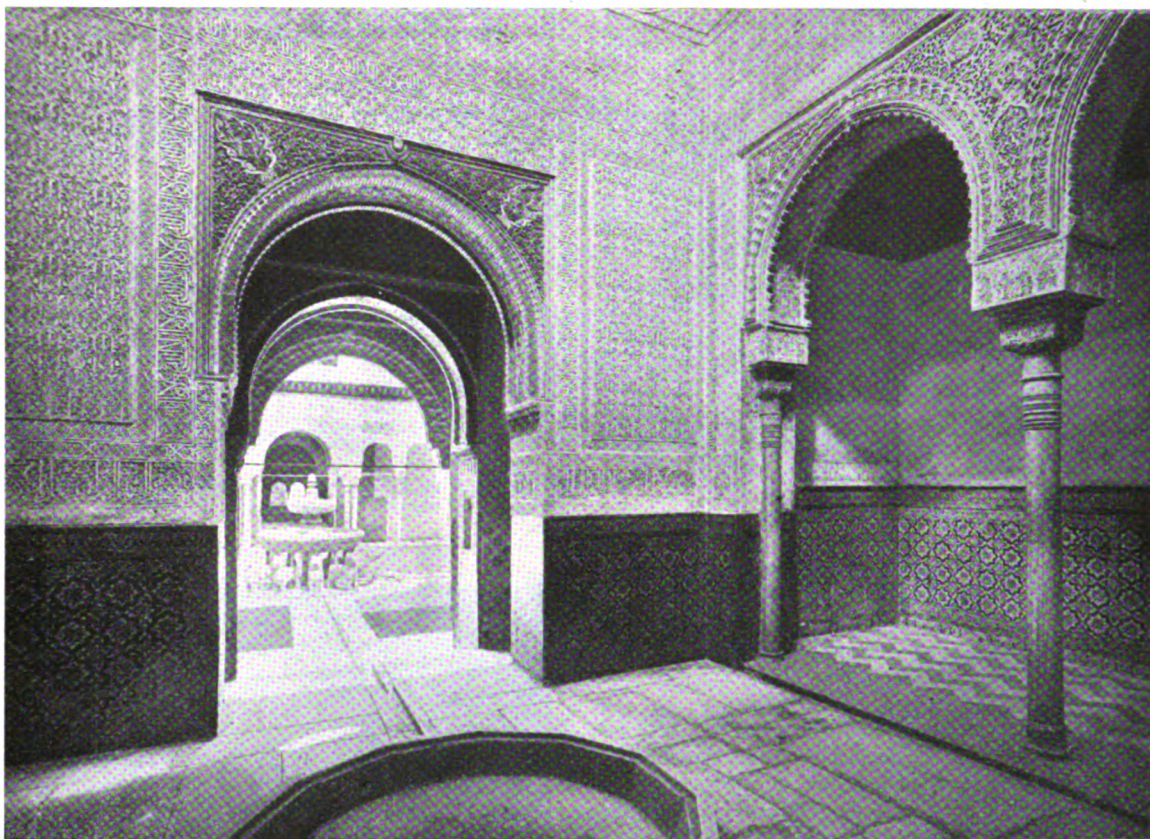
Notably did the tile come to its first shiny brilliance in the Byzantine-Arabic, the Mauritania-Almohade, and the Mudejar or Granadine eras, known precisely to archeologists and historians and a few others, which in turn evolved themselves into the Hispano-Mauresque. Never, even during the period when the Renaissance forced itself upon Spain from France and Italy, was the tile entirely absent; indeed it lent itself to a ready interpolation in the *estilo plateresco*, or surface-ornamented vogue, which in Spain also had considerably more than a reminiscent trace of the crude, Berber geometrical form.

So true have been Spanish architects in general to the

Obviously in the warm countries the glazed tile (an hygienic improvement over a mat-surfaced plaster revetment) for floors and wainscoting was vastly to be preferred to wood, which might become rotted, worm-eaten and insect-bored with a destructive rapidity which no known human care could avoid.

Tiles have none of these defects and inconveniences, presenting clean, enamelled surfaces, which are readily kept in the same pristine condition. They may be imbedded handily in mortar or cement, and are to all intents and purposes indestructible. The tile at its best is an improvement over the Roman and Greek application of mosaics, in that with no discounting of artistic worth much time, labour and expense may be avoided in producing an effect but little inferior.

Many old Arab and Moorish tiles were decorated, in addition to their fundamental arabesques, with verses from the Koran. A modern tile manufacturer in England has produced a whole series with Rubáiyát quatrains, intended for fire-place decoration. The scope of the idea is susceptible of a very great further extension.



TILED DADO IN HALL OF THE AMBASSADORS, ALHAMBRA.

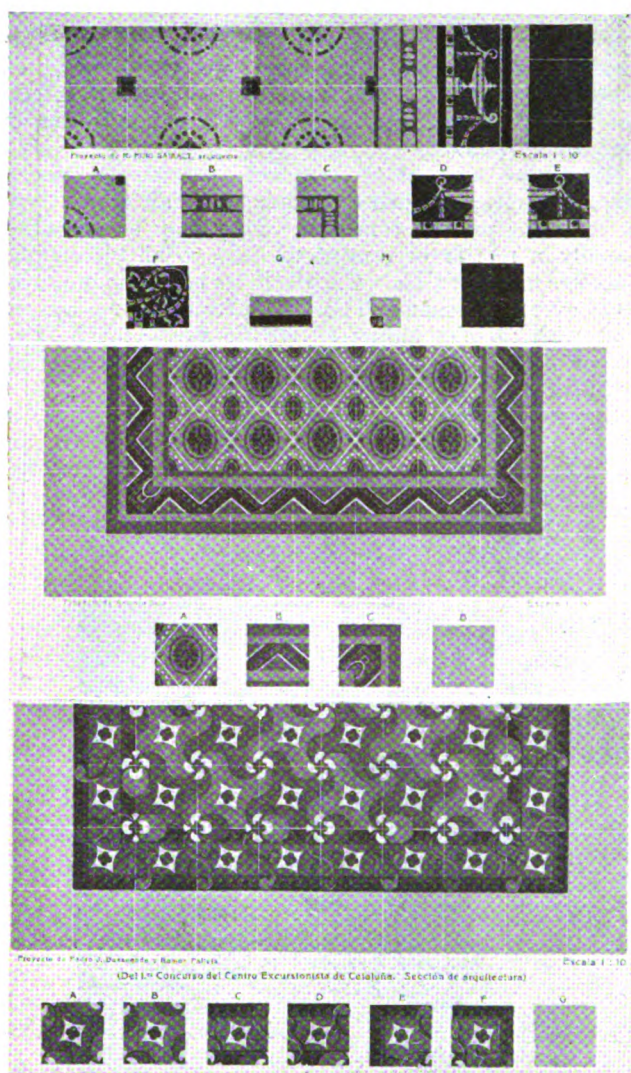
principle of exclusion of all animal forms in design that tiles in the Peninsula, whether they be modern or mediæval, have almost invariably followed the geometrical (and sometimes incised or embossed) forms of the pure Moorish type, seen at its very best in the now no longer closed Morocco of to-day. Here in the courtyard of the Grand Vizier's Palace in the old walled Sherifian capital of Fez (now a banally-named tourist hotel) may be seen the very best of the tiles of its indigenous epoch of construction.

Since time immemorial tiles have been used throughout Mediterranean Europe and the Near East countries. They are as old as the hills from which their first makers drew their clay. As pavements and wall decorations they seem to have been the stronghold of an art expression which has endured for centuries and may be accepted also as a manifestation of ideas of hygiene and cleanliness which are not usually attributed to the populations of those countries.

The invasion of Western Europe by the expansion and vulgarisation of the tile idea was due to the Moorish over-running of Spain and their bringing this, then new, embellishment of constructive elements with them.

Floor tiles have seldom had inscriptions or anything more than decorative devices worked out on their surfaces; there is something which goes against the better instinct when one is obliged to tread upon a phrase which is supposed to express welcome but which only suggests an insufferable egoism. That is why the door mat is vulgar. And as for walking on a rose-covered carpet of moquette—what sacrilege! The Moslem knows better, has a finer sentiment; though he has forty wives, his silken prayer rug follows the design of his porcelain tiles—is an arabesque pure and simple.

Obviously, for coolness as well as cleanliness, the tiled floor or wall has ever been recognised as to suitability for use in the Mediterranean countries of Europe and North Africa. In modern times the industry producing tiles in all their various and applied forms has been exclusively in the important ceramic centres, noted for their potteries and clay products, of Spain, France and Italy where the output has reached its most distinguished forms, though perhaps of less artistic appeal than the cruder, incised (*intaglio*) forms of the indigenous Moorish makers in the heart of



SOME MODERN TILE DESIGNS.

Morocco even to-day. There they have, besides the smooth-faced varieties, the traditional embossed forms, which in spite of their antique origin suggest still more ample possibilities in their future, wider application when the wave actually crosses the ocean to America, say, for as yet it is there in its infancy as compared with old Europe.

In continental Europe to-day most construction schemes find the interpolation of tiles, used both from a utilitarian and a decorative point of view, cheaper and more adequate in results than any but the most ordinary and least durable of woods; when it comes to oak or walnut the difference in cost is the more apparent, above all where the wood is highly worked or carved. As a means to an end the one single carved or embossed pattern tile is reproduced in infinite number and as varied a colouring as may be desired. Incidentally there is nothing to prevent the tile maker or the amateur house designer to employ as great an artist as Della Robbia to design his tiles if he will.

In Spain, France and Italy to-day can be had artistically produced tiles delivered from the manufacturer's stock, their motives and colouring ranging the whole gamut from designs so faint as to give but the vaguest impression of a design to others so vivid that they almost raise the temperature. Each has its uses, and one or another may be depended to line up with almost any imaginable colour scheme.

Collectors are already beginning to take notice, aside from museums who are keen and ready buyers of "epoch" tiles, and porcelain and faience enthusiasts are gradually enlarging the scope of their ambitions and including what are generally known as tiles, embracing all but mosaics, from the humble *moellon*, or "tomato" as the French call the hexagonal red floor tile, up through the art of the Persians and Moors to those finest of porcelain wall coverings of the *genre* made known to the western world by the Buen Retiro.

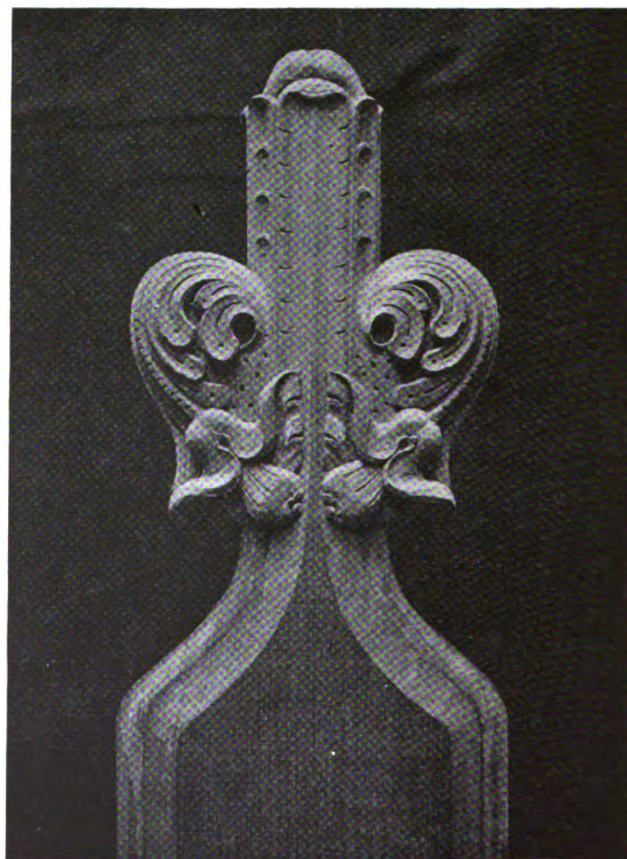
Of the old tiles made by the Moors during their sojourn in Spain those most sought are those of a metallic lustre, a tile which expresses the art of its maker at its very highest. Of such examples still to be had they show how well they have stood the changes and chances of centuries. Such examples when they fall into the hands of the collector or "amateur" usually run to a value of a few thousand francs at least, but they are the aristocrats of their class.

The finest of genuine Moslem tiles in private hands to-day—the museum specimens, so to say—have come from the ancient mosques of Turkey, Persia, North Africa and Morocco, as these countries have gradually come under European sway, above all that of that Philistine destroyer who usually styles himself merely a collector. Another part that these old tiles have genuinely played is as the inspiration of the modern tile makers with the well nigh perfection of production to which they have arrived commercially to-day.

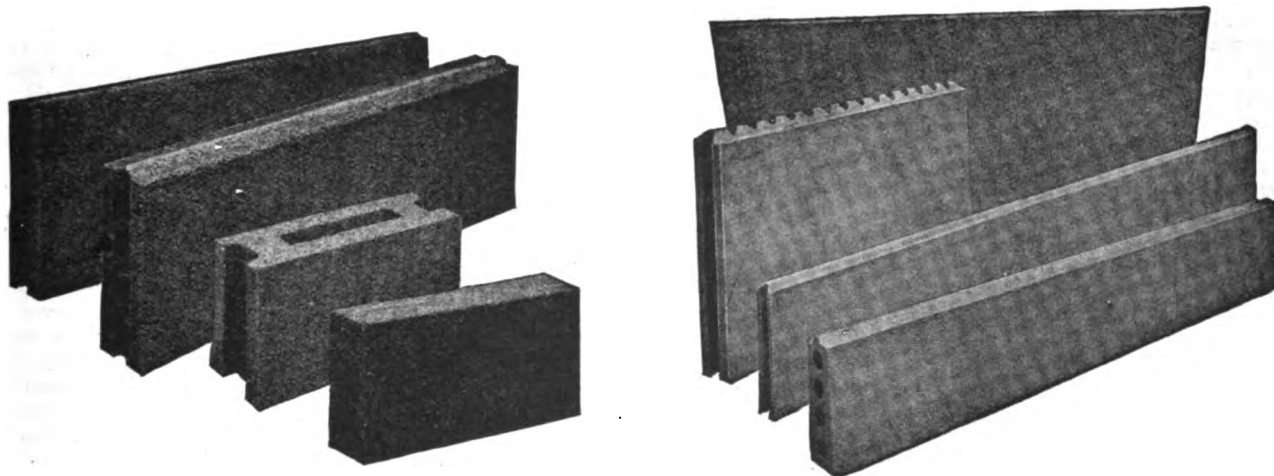
Mr. Charles D. Carus-Wilson, M.C., A.R.I.B.A., has been appointed Lecturer in Architecture at the University of Sheffield. Mr. Carus-Wilson, who has travelled extensively in pursuit of his architectural studies, takes up his duties after Christmas.

The report of Mr. C. H. Sandiman, civil engineer, on the proposed harbour development of Berwick, shows that the entire scheme will cost some £96,000. The scheme includes the erection of a south pier at the cost of £40,000; dredging at a cost of £42,900; the construction of an embankment on the Berwick side of the river at a cost of £7,800; and an extension of the fish quay costing £5,200.

Mr. P. Howard, architect, Manchester, was recently consulted by the Guardians of the Barton Union as to a new infirmary. The Board decided that in view of the surroundings—the institution is the centre of the industrial portion of Patricroft—it was not desirable to extend the workhouse buildings, and Mr. P. Howard, architect, of Manchester, was consulted and submitted plans for the lay-out of about 20 acres of land and buildings for the accommodation of 300 sick patients and nursing staff, a maternity block, and a children's home, at a total estimated cost of £80,000. The site for the proposed buildings has yet to be decided upon, but the scheme is to be submitted to the Ministry of Health for approval.

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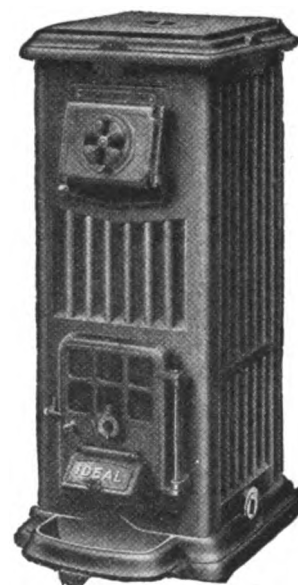
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The New Schedule "A" Assessments.

Sir H. Tristram Eve, K.B.E., discussed the subject of "Schedule 'A' Assessments of the Income Tax" at a meeting of the Auctioneers' and Estate Agents' Institute, held at Sion College, London, when there was a large and representative assembly. So much interest was manifested in the matter that the large room of the Institute was not big enough to accommodate those who wished to be present, and, accordingly, arrangements were made for the use of Sion College.

Sir Tristram remarked that it was with much diffidence that he approached the task, for his knowledge was limited, and there crept over anyone who wrote on taxes a feeling of the awful liability to make mistakes. It had been truly said that income tax must be considered as a whole, the same principles being applicable whether the tax was assessed on Schedules A, B, C, D or E. It was only for convenience that assessments were divided into those five groups. Inside the Administrative County of London the valuation list under the Valuation (Metropolis) Act, 1869, was conclusive both for taxes and rates, and his remarks would be confined to Schedule A outside London. The year of assessment ran from April 6. There could be a fresh assessment yearly, but Parliament generally decreed in the Finance Act of the year that last year's assessment should stand; and in about the fifth year a new assessment was ordered. As they all knew, we were in the midst of a new one now. The last assessment was in 1910. The first time we should be called upon to pay on the new assessments would be, he thought, in January, 1924, to cover the period from April 6, 1923, to April 5, 1924. The income tax was charged under Schedule A "in respect of the property in all lands, tenements, hereditaments, and heritages in the United Kingdom, for every twenty shillings of the annual value thereof." It was not necessary for the subject to claim the differences between gross and net. It would be done for them. Eventually they would be charged on the net assessment. Where a property was let at a rent, they must disclose that rent and the terms as to liability for repairs. Apparently if the rent was a rackrent and had been fixed within the past seven years, neither the assessor nor the subject had any choice of a different figure for annual value, again assuming that the landlord repaired and the tenant paid rates. It was a technical thought, and perhaps not worth their consideration, but he had been thinking that many rents fixed during the last seven years were not rackrents; they were vastly higher than normal rents, and often they were silly rents amounting to blackmail on the necessitous. They were certainly not true annual value, and he doubted if they were rackrents. Rackrent did not mean, as was popularly supposed, a rent screwed up to the highest pitch and beyond all reason. The intention in the original Act no doubt was to give scope to the assessor to neglect rents fixed within the past seven years if they were less than the fair rackrent, but in these abnormal times, and when things were reversed, why was it not equally fair for the subject to say that as certain rents were above rackrent the assessor need not adopt them as annual value? This would leave the door wide open for argument. Where the true annual value by comparison with similar houses was, say, £50, one could insist that £50 was the annual value within the meaning of the Act, and not £80, which was the rent fixed during the last seven years. Taxes were dull things, and, at any rate, he left the point with them. It might brighten a dull hearing of an appeal to Commissioners, and cause a frown on the brow of a much-worried inspector of taxes. Instances would occur to them of properties let with a big premium (which was rent in another form), and of farms and small holdings where the rents were far above the figure any of them would use in valuing for mortgage or estate duty. If the assessment for Schedule A when completed were the subject of careful examination by one who knew the property in the district, it would be found to be all "sixes and sevens" when compared with annual value as they knew it in business. The late Chancellor of the Exchequer (or perhaps he should say "last" and not "late," as Sir Robert Horne was very much alive) told the House of Commons that he expected ten millions sterling increase per annum from the country after this new Schedule A valuation. If all the hereditaments in the country were, in fact, let at rents, and Schedule A assessments were never to be used for any other purpose, then no one could complain of an uneven valuation as compared with true annual value, and there could be no objection to a man paying income tax on the basis of actual rents received. But all the hereditaments were not let. Some were let at rents which were fixed more than seven years ago, and some were owned by the occupier. The fun came in when the assessor was valuing a parish where there were hundreds of houses owned by their occupiers. How were these to be assessed? By copying the £80 basis or the £50 basis? What was to be the standard of value, and what period of value was to be used? Wait and see!

Rule I. of the First Schedule of the Income Tax Act, 1918, existing, the piano could not be in tune. But what was to be the general pitch of the piano? Concert pitch or lower? Post-war or pre-war? How would farms and small holdings be assessed which were owned by the occupiers? Would an attempt be made to find the annual value by taking a percentage on the purchase price? There would be a sad mess if this were attempted. How would shops be assessed? On the high basis dictated by multiple shops or on the local but lower basis? If the latter, would 1914 or 1922 values be copied? Also, what about works and factories and the hundred other kinds of property owned by the occupier? If the contractor's test be used, would the assessor be thinking of 1914 prices or 1922 prices? Before the war these questions would have been unnecessary, for all values were on a dead level. It looked to him that if ten millions extra per annum were to arise from this new Schedule A valuation, the late Government must have given instructions for "concert pitch." Neither in totals nor in individual assessments could it be said that the new valuation would be fair and equal except for income tax on the individual subject. It could not be uniform, or on the same lines as the poor rate assessment. It never was meant to be used for any other purpose, and yet there was a general impression abroad that it would be used for poor rate, district rate and county rate. If an assessment committee adopted it entirely and copied it in the form of a valuation list for a parish, it could be laughed out of court, on the ground of unfairness and inequality. But the question of the county rate being based on the new Schedule A assessments was a real danger, and now was the time to discuss it. Under the County Rates Act, 1852, annual value was the basis, but no direct assessment was made on individuals. Totals of parishes only were used, but nevertheless these totals must be made up of fair annual values. As they knew, the county rate basis committee of a County Council could make a new basis whenever it liked, and overseers were informed of the assessable total of their parishes. County Councils, twice in each year, demanded of parishes, through the Board of Guardians, amounts of money to meet current expenditure, and the allocation was made on the basis of these parish totals. The overseers collected the amount due, and paid it to the Guardians by medium of the poor rate. It was the practice of the majority of County Councils to make their basis entirely on Schedule A assessments, and before the war this was not unfair, for there were no wild and differing rents in existence and no orders for "concert pitch." Other councils used the poor rate totals for their basis. What were county rate basis committees going to do when the new Schedule A valuations were published in 1923? They were entitled to a copy from the inspector of taxes. He respectfully suggested that the County Councils' Association should be approached by Ratepayers' Associations, and by agricultural and professional organisations, before it was too late, with a view to discussing the advisability of not adopting the new Schedule A valuation as a basis for county rate. There was a great temptation for County Councils to attempt to use it, as it would mean vast increases on the present totals of parishes. County Councils were composed of human beings, and it was only human to welcome high assessments, which would reduce poundage, with resulting (but only apparent) credit for spending less money. The only solution he could think of was for the County Councils' Association to impress on all County Councils the wisdom of letting the old figures stand until the effect of war conditions had gone, and to neglect entirely the new Schedule A valuation as a county basis, as being admittedly unusable for any other purpose than for collection of income tax. Perhaps the Auctioneers' and Estate Agents' Institute might take the lead in this matter. The same remarks applied to any suggestion that the new assessments could be used for poor rate, although, as he had said, this could soon be quashed by objection and appeal on the grounds of unfairness and inequality. But it was a question whether the Institute should not make representation to the officials of the National Conference of Assessment Committees. It was always wise to attempt to get in front of a threatened evil or likely mistake as against merely waiting until the mistake was made and then grumble. So long as County Councils and Assessment Committees and overseers kept within the four corners of the law, they had a perfect right to put forward figures for assessment which legally had the colour of annual value, whether copied from Schedule A assessment or elsewhere; but just imagine the worry and expense to ratepayers in parishes in the case of county rate, and to individuals in the case of poor rate, if this basis be used. Was it likely that overseers of a rural parish would face the expense of an appeal to Quarter Sessions against the wealth and talent of a County Council? Just think of the mass of detailed evidence overseers would have to prepare and pay for to show that the total of their parish was too high. It was unthinkable, and a horrid waste of money for two public bodies to fight. To avoid this, the only



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A. Marshall Mackenzie & Son, F.F.R., I.B.A.
Architects.

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way he could see was to get busy, and persuade County Councils and Assessment Committees to study the question, and to decide that they would not adopt the new Schedule A assessment in any way, either in whole or in part. From his experience he fully believed that valuation lists and County Council bases should, as far as possible, continue to be on pre-war values, and any attempt to use a basis of 1922 values would be disastrous and unworkable. In his opinion it would not be long before values, generally speaking, would return to a 1914 basis. At any rate, it could only be a question of time, although no human being could say when.

Competition News.

Members of the Society of Architects are requested not to take part in the Castleford Cottage Hospital Competition, without first ascertaining that the conditions have been approved by the Council of the Society.

The Welsh National War Memorial Committee recently met at Cardiff to consider the names of sculptors who might be asked to submit their conceptions and designs. Though under Sir Thomas Brock's scheme the memorial was to take the form of a fountain, it was felt that the sculptors to be approached should be perfectly free in their conception of the memorial. The names of four gentlemen were agreed upon, and these are now being approached as to their willingness to act. As soon as this has been arranged, it is proposed that the Earl of Plymouth, Sir Cecil Smith, Mr. H. V. Lanchester (architect to the City Hall), and a sculptor to be named by the President of the Sculptors' Society, shall act as the Selection Committee, and it is hoped early in the New Year that that committee will be able to report with a view to the work being started as soon as possible.

London County Council.

Admiralty Arch Improvement.

Threatened obliteration of the view of the new Admiralty Arch from Trafalgar Square formed the subject of a question at this week's meeting of the London County Council. Mr. R. Myer asked the Chairman of the Improvements Committee whether it was by consent of the Council that new buildings were being erected, obscuring the view of the Arch, and whether the work could be stopped, so that the view, instead of being impeded, might be improved, thus adding to the amenities of the most important site in the whole of the British Empire?

Mr. Meinertzhagen, Chairman of the Committee, replied that the buildings were being erected in accordance with the Mall Approach (Improvement) Act, and the position and design had been approved by H.M. Office of Works, the L.C.C., and the Westminster City Council. The treatment of the Mall approach was under consideration for many years, and after full discussion and negotiation between the authorities concerned, the authorised scheme was agreed upon.

New Charing Cross Bridge.

Replying to a question by Mr. J. D. Gilbert, M.P., regarding Sir Hamo Thornycroft's published proposal for a new bridge across the Thames at Charing Cross, Mr. Meinertzhagen said he would ascertain whether or not it was possible to arrange for models and sketches to be exhibited at the County Hall. In view of the recent decision of the City Corporation not to proceed for the moment with the construction of St. Paul's Bridge, Mr. Meinertzhagen promised to bring Sir Hamo's proposals before the Improvements Committee, with a view to calling a conference of all interested parties.

"The Architect" Fifty Years Ago.

DECEMBER 14, 1872.

"CONSULTING ARCHITECTS."

SIR,—You have devoted an article to the subject of consultations; and as the mention of that subject at the Institute grew out of a Paper read by me, I should like to offer a remark on the question of fees which you raise in that article.

It is quite true that a physician sees you for a guinea, but I believe he does not count upon giving you more than a quarter of an hour if he can help it; and the remuneration is ample at that rate. I doubt, however, whether, as a rule, a guinea ought to represent the fee usually charged or paid for such consultation as an architect ought to be paid for.

When you consult a friend on a point as a friend, or even go to submit to a professional brother, personally a stranger, such difficulties as his knowledge or position enables him to solve in a few minutes, I fancy that professional feelings will be best promoted by no fee being received. When, on the other hand, the matter is one on which a very considerable amount of time must

be expended, and in connection with which the adviser takes some responsibility; considering, also, that you go to a consulting architect for his specialty, and that what you get of him is his very best, you ought, it seems to me, to pay him well when you do pay him.

I have been repeatedly consulted on questions connected with sound, and have found that, with a few exceptions, the cases where it was proper to receive a fee at all were cases which involved going to see a building, and trying experiments in it, and a good deal of anxious consideration and some responsibility; and the same would be to a large extent, I suppose, true of any other special point on which any architect is consulted professionally by a brother architect. I venture, therefore, to suggest that we architects should be prepared both to give and get simple advice (among ourselves) for nothing; but that where there is real responsibility, especially if the advice goes before the client in any shape, or is paid for by him, a substantial fee should be paid for it.

Yours obediently,
T. ROGER SMITH.

General.

A plumber's apprentice was awarded £275 compensation at the Southport County Court in respect of the loss of his right eye, sustained while engaged on a house at Formby.

The Bristol Town Council have given formal notice of their intention to provide a public elementary school for about one thousand children at Fishponds.

A Ministry of Health enquiry was held at Sheffield on the 7th inst., into an application by the City Council to borrow £30,000 for a garage to be erected at their Bernard Road clearing depot. Mr. Edwards, the city architect, gave evidence.

Proposals are under consideration for improvements and repairs at Aberdeen Harbour at a cost of £300,000. The matter will come before a special meeting of the Harbour Board on a recommendation from a committee.

Hull City Council decided on the 7th inst., to invite tenders for the erection of seventy-four houses on their West Hull site. A proposal that the City Engineer should be called to send in a competitive estimate was lost by a large majority.

Peterborough Board of Guardians have been urged by the Ministry of Health to abandon their small scheme for enlarging their Institution in favour of the erection of a modern pavilion at a possible cost of £15,000. Their letter says:—"In the designing of such a scheme the Minister's officers will be pleased to give the Guardians any assistance in their power."

In connection with the bicentenary of Sir Christopher Wren, which it will celebrate in the New Year, the Selborne Society is arranging a visit to Paris at Christmas. The special object is to study the architecture of that city, from which Wren obtained considerable inspiration. All particulars may be obtained from the Travel Secretary, Mr. William R. Harvey, 27, Vanbrugh Hill, London, S.E.3.

The Dean of Westminster dedicated, on the 7th inst., a window in the North Aisle of Westminster Abbey, designed by Mr. J. N. Comper, and erected to the memory of Sir John Wolfe Barry, a former President of the Institution of Civil Engineers, who died in 1918. Lady Wolfe Barry was present, with all the available members of the Wolfe Barry family, and there were also present a large number of distinguished engineers and personal friends of the late Sir John Wolfe Barry, including Sir Aston Webb, P.R.A.

Aberdeen Art Gallery Committee, on the 5th inst., inspected and unanimously approved of sketch plans for the extension of the Gallery, the War Memorial Court, and the Cowdray Hall and Art Museum, the whole to cost over £66,000, of which sum £59,300 has already been subscribed. Dr. A. Marshall Mackenzie, A.R.S.A., LL.D., the architect, will prepare plans and specifications and invite tenders for the execution of the work under three separate contracts—the War Memorial Court, estimated to cost £25,000, for which the sum already subscribed was £20,300; the Cowdray Hall and Art Museum, for which Viscount and Viscountess Cowdray had guaranteed the whole cost of £20,000; and the Art Gallery extension, estimated to cost £14,000, and to which the Clark trustees had given a grant of £6,000, the Macdonald Art Collection Committee of the Town Council a grant of £3,000, while private subscriptions amounted to another £3,000, and the Town Council had also provided the site, valued at £7,000. It is expected work will be commenced early in the spring.

Trade Notes.

The Admiralty last week placed a further contract with Messrs. Joseph Kaye & Sons, Ltd., of 93, High Holborn, London, W.C., and Lock Works, Leeds, for their Patent Seamless Serrated Oileans.

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An Expiring Effort.

In the last fortnightly record of the National Housing and Town Planning Council it is evident that Mr. Aldridge, who has so warmly seconded Dr. Addison's efforts, is now attempting to buttress up the last remnant of the national scheme by quoting the utterances of Sir Alfred Mond, who stated that "there is a considerable feeling throughout the country that the penny rate scheme is by no means the best scheme that can be devised. That is shared by a good many local authorities, who prefer greater freedom. I personally feel that the local authorities would have done better if they had been allowed greater freedom. I do not think public opinion would tolerate the continuance of the present scheme as it stands."

Mr. Aldridge goes on to say that, though no decision was reached by the late Government relative to the proposals foreshadowed, a change in the terms of financial co-operation between the State and the local authorities would without a doubt form the basis of any new instalment of the housing programme of 1919, and the indefatigable National Council is to hold conferences early in the year to supply the hiatus which Mr. Aldridge assumes exists.

We claim that the clearly understood basis of the present Government's policy is that future housing must be left to private initiative, with the exception of that made necessary by the clearance of slums in the interests of public health. This does not prevent any municipal or other authority inaugurating housing schemes of their own, so long as such schemes are entirely financed out of the local rates of such districts. It does, in our view, preclude the adoption of any scheme whereby housing shall be carried out with the aid of national funds.

Mr. Aldridge is, however, going to attempt to carry proposals at a series of conferences whereby a definite sum per house shall be contributed by the State in respect to assisted housing schemes, such sum to represent a definite percentage on the loss as set out in an estimate to be submitted to the Ministry of Health before the building tender is accepted by the local authority.

The State should further lend money to local authorities *at the rate of interest current before the war—viz., 3½ per cent.*; the difference between this percentage and the amount at which the State obtains its money is to represent the subsidy given by the State.

The plain meaning of this is that private initiative would still be left to compete with State-aided schemes, which we know to be impossible, and in all human probability less housing would be carried out than would be the case if the Government contributed nothing out of national funds. Sir Alfred Mond tells Mr. Aldridge that before leaving office he formulated a scheme whereby the State would make every local authority providing houses a fixed contribution of from £3 to £4 for each house provided. This seems to us both vicious and useless, vicious because it involves the principle of Governmental aid, and useless because we cannot imagine that so small a contribution would induce any authority to carry out building schemes. It seems curious to us that neither Sir Alfred Mond

nor Mr. Aldridge refers to the assistance which might, at the option of local authorities, be given to all who undertake housing schemes by exempting them from the incidence of rates for a term of years. Assuming that housing is required, local authorities would stand to lose less by granting such relaxation than by financing schemes which do not show an economic return, and it can be demonstrated from the experience of New York that such a relaxation has enormously stimulated the supply of new building.

Sir Alfred Mond thinks that further State assistance is necessary to bridge over the transition period before ordinary economic conditions are restored, but we believe that such conditions will never be restored until the State ceases to interfere with economic conditions which are utterly beyond its power of control. So long as people can escape paying economic rents they will naturally do so, and as long as they do so it will be folly for the speculator to provide accommodation for which he cannot obtain an economic return. If, as the former spokesmen of the Ministry have urged, houses can now be built for £350, there is no reason why the State should contribute anything. Assuming there are people who cannot pay rents which will give a reasonable return on such an outlay, it must be left for private enterprise to provide them with even simpler accommodation on which a reasonable return can be obtained. If this, too, is impossible, have we not reached a condition in which it is necessary to consider not State-aided housing, but State-aided emigration? For the absence of an ability to pay must be a direct consequence of the lack of remunerative employment, and, if so, there is no use in making impossible conditions permanent. To do so must in the end add to and not subtract from the number of our difficulties, and, beyond being impolitic, is neither wise nor kind. Sentiment of the kind lately displayed by Lady Astor will help no one, but a deliberate attempt to base our action on facts and not on sentiment may, and will, help us to find a solution of our difficulties.

Mr. Aldridge has our admiration for the manner in which he has fought for a lost cause, but it must now be regarded as a *chose jugée*, and there is little use in endeavouring to blow up the embers of a fire which has burnt itself out. We now know that the imagination of those who, in the moment of victory in 1918, believed the millennium had come led them astray, and have begun to realise that recent events have made life infinitely more difficult for everyone. We need not trouble to blame anyone for breaking pledges which involved what we now know to be impossible, the one fact remains that the all-important thing is for the State to reduce its claims on the individual, and in order to do so it must simplify and not extend its functions, and reduce and not enlarge the sphere of its activities. If in the future official housing is to be limited to that financed by public bodies, there is no reason why the staff of the Ministry of Health should not be drastically reduced, since that body would simply exercise the functions of the former Local Government Board.



GOVERNMENT BUILDINGS, PRETORIA. HERBERT BAKER, A.R.A., Architect.

Our Illustrations.

UNION BUILDINGS, PRETORIA, SOUTH AFRICA. HERBERT BAKER, A.R.A., Architect.

Notes and Comments.

English Bricks and Foreign Competition.

Our attention has been called to a letter in the "Clay-worker" from the Chairman of the Daneshill Brick and Tile Works, dealing with the imminence of an attempt to introduce Dutch bricks into this country on a large scale. So far we can point to occasional buildings only where Sir Edwin Lutyens and other leading architects have used Dutch bricks in isolated cases because of the appeal made by their colour, texture and size. We quite agree with the writer of the letter, part of which we quote below, that there are plenty of brickmakers in this country who can and do make bricks which could not be equalled or excelled, and which, provided they can be obtained at reasonable prices, should render foreign competition innocuous. Mr. Hoare, the Chairman of the Daneshill Brick and Tile Works, whose managing director, Mr. L. C. Wheatam, is well known to many architects, says:—

The inference is that little or nothing has been done by British manufacturers to meet the requirements of architects who wish to produce the most artistic effect that is possible in brickwork, and, further, that we should go to Holland or the South of France to study the question.

I hope that some of our leading manufacturers with greater experience, and whose firms have been established for a great many years, will come forward to explain that we are not all

obsessed by the nightmare of standard bricks 9 in. by 3 in., but perhaps you will allow me to write, as a more modern brickmaker, having started and maintained works for the very purpose to which reference is made.

In the first place these works owe their origin to Sir Edwin Lutyens, who, when building the house of the writer, encouraged the making on the spot of bricks 11 in. by 5½ in. by 1½ in. He required, further, thin and moulded bricks for houses which he was then building, which were made satisfactorily, and since then the business has never looked back.

Under his tuition due regard was paid to texture and to colour. As an instance of this it may be mentioned that we have been able, in several instances, to match existing old brickwork.

We have always stocked bricks of thicknesses as follows: 2½ in., 2½ in., 2 in., 1½ in., 1½ in., and 1 in., with lengths varying from 11 in. to 5½ in.

We now make and stock over 50 sizes of special bricks and tiles for fireplace and creasing work, together with a large assortment of moulded bricks in the varying thicknesses required to work with the facings.

I am happy to say that the trade in thin bricks has already revived, and we are busier than at any time that I can remember. Our answer to the question "What are you going to do about it?" is that we propose to extend upon the lines on which we have been working for the past 20 years, and that we do not fear competition from Holland or Belgium.

We should, I think, welcome a second course of instruction. After all, Dutch competition is nothing new. I well remember

what a blow it was when a large house in Queen Anne's Gate was built of Dutch bricks in competition with ours. But we were told that the price of these (some 12 years ago) was 23s. per 1,000 delivered in barge loads, and that the cost price of manufacture in Holland was as low as 8s. We set to work, explained the circumstances to our men, and were able to reduce our costs considerably and to establish a fair trade in "Dutch" sized bricks.

There is a further point to be borne in mind. The Dutch brick in colour, texture, and composition harmonises admirably with its surroundings. We believe that the English brick in our climate and surroundings, when used with taste, is at least as good in appearance and more reliable. Many clients, as well as architects, prefer to use the home product at a cost which must always be greater, while Dutch wages remain at so comparatively low a level, and while the burden of taxation here is so high.

We submit, too, that the English broken colour gives as good results in this climate as the more subdued Dutch tints.

For these reasons we have ourselves no fear of Dutch competition, and we assert that the progressive English brickmakers can prove to the architects and their clients that we have already available an article which is quite as good—that we do not clamour for protective duties, but rather work to be freed from Government restrictions—that wherever possible we reduce our costs, and that we are not ashamed to emulate and imitate the best brickmakers in the world, who have centuries of experience behind them.

There are several points of a general nature which may reasonably be emphasised. For example, while our leading English manufacturers and merchants are alert, the general average includes many men whose methods kill business. An architect may select a brick, for example, which he likes, only to find he cannot get an adequate supply without waiting for months. If the firm is asked whether it will make some modification of the standard sizes, not even the certainty of a large order will induce it to make an effort. History repeats itself, and the more enterprising and obliging foreigner gets a position of advantage which he might otherwise strive for in vain. Architects are like the rest of the public, and will usually save themselves unnecessary trouble. Much harm also is done by firms who prematurely show architects samples or descriptions of what they mean to produce. The architect is interested, but when he proceeds to place an order finds that he may have to wait an indefinite time before he can get what he wants, and the experience tires and disillusions him. We would urge firms to make no improvements known before they are in a position to deal with commercial demands. What we say is that the worst enemies of any industry are to be found in the ranks of that industry itself, and the greatest reform that can be instituted is for every industry to try to control and improve the methods of its more backward members. If this were done, foreign competition would often become a chimera, though we have to admit that many of us are not sufficiently alive to the importance of keeping the natural wealth within our own country. Middlemen are alone the gainers by any other policy, and we cannot retain our prosperity if we attempt to live "by taking in each other's washing."

Malapropos.

We rather feel in agreement with Mr. Deputy Ellis, who stigmatised the request of the Royal Institute of British Architects for the use of the Guildhall for a fancy dress ball in connection with the celebration of the bicentenary of Wren's death as being a "joke."

Mr. Ellis is reported as saying "Fancy celebrating a man's death by a fancy dress ball!" and we agree that the idea is not a fitting one. As a matter of fact, it is perhaps a mistake to say we are celebrating the bicentenary of Wren's death, but should rather put it that two hundred years after he had passed away from life we were doing honour to his memory. We should have to wait nearly ten years longer to celebrate the tercentenary of his birth, but all must admit that this would be a better choice of dates, if circumstances permitted it. Mr. Ellis's comment has awakened us to a point we have been conscious of without defining our mental impressions; but, after all, the point is an academic one. The broad fact is that the occasion has

been created because it synchronises with the necessity of finding a large sum of money for the work which must be done to St. Paul's. Had this not been the case, the bicentenary of Wren's death would probably have been noticed by passing references only.

The Furnishing Guild's Bankruptcy.

After the Building Guild, the Furnishing Guild, is the reflection suggested by the announcement that a petition for the winding-up of the Manchester Furnishing Guild has been presented. We hope, however, that, like the Building Guild, means will be found for solving its difficulties and enabling it to continue a most useful work. Too much success is stated by the Secretary of the Guild to be the cause of its troubles, but this is a euphemistic manner of describing what has occurred. Success in a commercial venture may be defined as involving a good balance sheet, in which expenditure is more than balanced by receipts, and it is obvious that such a state would not produce bankruptcy. We can quite understand that more orders were received by the Guild than it could cope with, but we suggest that it has been trying to do work at impossible rates, which have somehow or other involved a deficit. There are two other similar guilds, one of which is connected with London and the other with Newcastle, and these are said to be entirely independent of the Manchester Guild. We hope this is so, and that the difficulties which have arisen may be straightened out, for nothing could be more likely to bring about commercial peace than for the workers in various trades to acquire actual experience of the difficulties and advantages which are inseparable from management and responsibility.

Sir Robert Lorimer's Proposed Edinburgh Shrine.

A model of Sir Robert Lorimer's proposed new War Memorial on the Castle site has been erected in skeleton outline in order that public opinion may decide whether it destroys the architectural silhouette of the Castle site, and the "Scotsman" gives photographic views showing the effect the building would have. Our contemporary states that no effort was made at an early stage to discover whether it would accord with the surrounding buildings or alter the familiar silhouette of the Castle. This, judging by the views given, it undoubtedly does, but we cannot quite see why this should be deemed to be necessarily a fault. It is to be a national memorial of our efforts in the greatest war which has taken place in the world's history, and would for that reason be fittingly placed in what may be said to be the most historic site in Scotland. Is it not natural that it should stand out as the most prominent building on that site, and, unless the new silhouette is unpleasing, is the fact that the old silhouette is altered a fault? The question of whether the building is worthy of its purpose or otherwise is a paramount one, and we can see no other which seems to us to be worth discussing. But unreasoning antiquarianism is often found side by side with a complete absence of response to æsthetic appeals, and may in this, as in other cases, prove to be a dominant consideration.

The building programme for 1923-24, submitted by the Monmouthshire Education Committee to the Board of Education, involves an expenditure of £167,245, and includes secondary schools at Chepstow, Rhymney, and Nantyglo, new schools at Ynysddu (£11,000), Markham Village (£15,000), Cwmcaron (£10,000), Cwmbran (£12,500), Penygarn (£15,000), Tranch (£10,000), Rogerstone (£15,000), and a new school of a semi-permanent type for physically and mentally defective children at Caerleon (£40,000).

An Order in Council applies section 14 of the Ancient Monuments Consolidation and Amendment Act, 1913, by which penalties are imposed upon any person injuring or defacing any monument, to the following abbeys, castles, etc., in Yorkshire:—Bolton Castle, Bowes Castle, Conisborough Castle, Coverham Abbey, Easby Abbey, Egglestone Abbey, Fountains Abbey, Guisborough Abbey, Helmsley Castle, Jedvaulx Abbey, Kirkham Abbey, Middleham Castle, Mount Grace Priory, St. Mary's Abbey, York, Wressle Castle.

London Art Galleries.

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New York as a vision of artistic beauty: its skyscrapers turned into the towers of fairy palaces: its bridges and wharves, teeming with industrial activity, viewed from the artistic standpoint: such is the task that Joseph Pennell has set himself in his present exhibition at the Fine Art Society of his "Water-colours from my Brooklyn Window," there shown with some admirable etchings, and, on the whole, has achieved in the most remarkable fashion. "To go down," says Mrs. Pennell, "into New York is to know it as the city of noise and rush and crowds. But to us, on our Brooklyn height, it reveals only its beauty, unbelievable, inexhaustible. New York, as we see it from our Brooklyn windows, is a city made of light and colour. The group of skyscrapers across the East River, the solid mass and airy grace of Brooklyn Bridge, the wide Harbour, island-strewn like the Lagoon at Venice, are beautiful in themselves, but they grow in beauty as they change with every changing hour. New York never repeats itself, never exhausts its possibilities. Each dawn brings new marvels, each noon new brilliance, the wonders of sunset are without end."

A point that forces itself upon us many times in these water-colours is the fine treatment of cloud form. They claim our notice throughout, in "Great White Clouds," or masses sombre and menacing in "The Black Hand," in "Red and Gold," and other drawings here, fantastic, emotional, or rejoicing in the wind and light—generally in movement, less often, as with Shelley's "Cloud":

"With wings folded I rest, on my airy nest,
As still as a brooding dove."

Another point to be noted in the etchings is the sharply "staccato" note. Often these suggest scenes away from the hustle of New York, and the artist is careful to explain in one of these that it is "Not Naples, but New York," while "The Woolworth, through the Arch, New York," suggests some southern cathedral seen through a Renaissance archway. This leads us to the question whether in these etchings and drawings the artist may not have—perhaps subconsciously—forced the picturesque note and brought the surroundings, so frequently sordid in themselves, of modern labour into the harmonies of old-time achievement. The station of Pittsburgh here, with its hurrying crowd and immense vaulted roof, has something of the character of a Byzantine or Gothic crypt; the skyscrapers in the "Fruit Boat" painting rise like the domes of some fairy palace. But in "Freight Tracks, Chicago," we have a wonderful drawing—which few but Pennell could do—of an immense railway track crossed by countless sleepers; and "Going South," with the liner getting up steam, suggests escape from even the New York here given us to some less noisy, hustling, and more sun-illuminated southern shore.

In the lower rooms of this Gallery is now being shown an exhibition of original etchings by fifty artists of repute. These include Albany Howarth, Mortimer Menpes, Sir Frank Short, D. Y. Cameron, Lewis Baumer (with some charming figure studies), Anders Zorn, Blampied, F. Simon ("La Bourse" and "Juif d'Amsterdam" are excellent), Adrian Hill (a finely drawn "Windmill"), Detmold, William Strang, R.A., and Frank Brangwyn, R.A., with six etchings, among which the "drypoint" of "Scaffolding" and the huge hulk of the great ship in "The Duncan" are magnificent.

I have already referred in these notes to the Memorial Exhibition at Walker's Galleries of the work in art and science of Lawrence B. Phillips, A.R.E., F.R.A.S. Mr. Phillips possessed—what is infrequent, though there are some brilliant instances, such as Leonardo—the artistic gift doubled with a passion for science. Born in 1842, at the age of eighteen he had invented the rocking bar movement for watches, and had produced the first keyless watch; and in the glass case in this display we see an early example of the keyless watch invented by him and manufactured by him (unluckily, he neglected to patent it) till 1882. At the age of twenty-three he was elected to the Royal Astronomical

Society—a great honour for one so young—and published in 1871 his "Horological Rating Tables"; but I wish here to speak of his art work, especially as an etcher. I consider his etchings shown here, in such subjects as "S. Giorgio dei Greci," "Chillon," "In Harbour, Sunset," and "Watching the Boats," as on a high level, and immensely in front of his oil paintings, some of which are rather weak. He was elected an Associate of the Royal Society of Painter-Etchers in 1887, and exhibited there fairly regularly.

In the same Galleries a group of six ladies—Catherine Oules, daughter, I believe, of W. W. Oules, R.A., whose portrait she exhibits here, Ethel Everett, who shows a cover and some charming illustrations for "Elizabeth Ann's Delight," Estella Canziani, who has tempera as well as water-colour and oils, Beatrix Holmes and M. C. Bowerley with illuminations, and Letty Graham with silver work and jewels set in silver—are holding an exhibition which may be very seasonable at this period of Christmas gifts.

A small but well-selected and thoroughly satisfactory exhibition is that of "Modern and Contemporary Painters" at the St. George's Gallery. These artists include Julius Olsson, R.A., Hughes Stanton, R.A., Augustus John, A.R.A., Philip Connard, A.R.A., Davis Richter, R.I., Moffat Lindler, R.I., and Russell Flint, R.W.S.; and it is not too much to say that all these artists, as well as Sir John Lavery, R.A., are well represented. But I must reserve my special praise for two landscapes here—"Norfolk Moors," by Arnesby Brown, R.A., and "Afternoon, a Cornish Bay," by D. Murray Smith, R.W.S. These are both very similar in composition. A low horizon in both; in the first, sheep in the foreground, which this artist always handles so well, and a blue sky flecked with white clouds; in the second above the line of beach and sea a sky with splendidly massed clouds. I consider this last the best thing I have ever seen of this painter in this medium; and the whole little show—twenty-seven works in all—attracts without fatiguing.

The Burlington Fine Arts Club is devoting its winter exhibition to the drawings of John Robert Cozens, combined, as so often in these winter gatherings, with some attractive furniture pieces of the period. When we see, as here, sixty-three of this master's drawings together, in spite of a certain sameness one cannot, I consider, help being astonished at his power. Cozens, born about the middle of the eighteenth century, was at the beginnings of our landscape art—the man whom J. M. W. Turner studied and copied (two of his drawings are shown here with Turner's transcript of them) and of whom Constable wrote in 1845: "He was the greatest genius that ever touched landscape." He was already in Florence in 1776, returning to London in 1779, and he was invited by William Beckford of Fonthill to accompany him as draughtsman in a second visit to Italy, commencing with Venice so that, as Beckford wrote home, "Cozens may sketch some of my favourite Isles." Beckford returned home to marry, but Cozens remained in Rome; and his studies there are of such interest that I shall return to them at more length before this exhibition closes.

The extension to the Guildhall Art Gallery is now open to the public: the new upper room is now hung with paintings, including the works of Millais, Constable, Dyce, Poynter, and Arnesby Brown; the lower room, so far empty, may later be used for sculpture.

S. B.

The Glasgow Corporation propose to proceed after next May with the reconstruction of the east side of Stockwell Street—an important project delayed on account of the war. Sir John J. Burnet, architect, estimates at £81,000 the cost of the erection of the building on the south section of the proposed improvement.

The Newport Corporation Waterworks Committee have considered a report of their engineer as to tenders received for laying pipes in connection with the Talybont Waterworks scheme. It was eventually decided to recommend the Corporation to accept the tender of the Unit Construction Co., which runs into about £250,000. The contract includes the laying of the water mains from Talybont to Newport, and also construction of a subsidiary reservoir at Llantarnam. Work will be commenced early in the New Year, and as far as possible local labour will be employed.

Royal Institute of British Architects.

A special general meeting preceded the fourth general meeting of the Royal Institute held on Monday, the 18th inst. Mr. Paul Waterhouse, President, was in the chair.

The following resolution, passed at the special general meeting held on Monday, December 4, was adopted:—

"That the Council be authorised to create a mortgage or otherwise to charge all or any the leasehold and freehold property of the Institute as the Council shall think fit, to secure the sum of £20,000 and interest, and to execute such deeds and documents as may be required in connection therewith."

THE LATE SIR ERNEST GEORGE, R.A.

The death was formally announced of Sir Ernest George, R.A., Royal Gold Medallist, 1896, and President of the Institute from 1908 to 1910. Sir Ernest George was elected an Associate in 1861, a Fellow in 1881, and transferred to the list of Retired Fellows in 1921.

Mr. Paul Waterhouse, the President, paid the following tribute: "If ever the word 'gentleman' meant a man of perfect gentleness, that man was the late Sir Ernest George. In his passing away many of us here have lost an inspiring master. Some were actually his pupils; others were followers of his work, in the sense that men of his artistic strength compel the homage of sympathy. Others, again, including most of his contemporaries and a great multitude of his juniors, have known, felt, and loved the personal character which was so deeply expressed in the character of his work. In few men has personality been so close to its expression in architecture; and it is this close union of the artist's own spirit with the spirit of his achievements in building craft which makes me speak of the gentleness which infused both. He was a great pioneer, and a pioneer of the right kind. No man of his epoch was more filled with the obligations of truth to tradition, yet no man combined this obedience to the past with a more conspicuously personal motive. It is my lot to pass almost daily one of his greater buildings. It is a piece of monumental architecture standing somewhat apart from the domestic work which made up the bulk of his successful achievements. It has the formal balance demanded by its classic pose, it has in its detail and in its composition all the elements that make it a true descendant of Rome; yet every brick and stone of that building says its greeting to me in a language which is like the very voice tones of the friend we have just lost. He was a great man, great with a greatness which even his almost startling modesty could not and must not obscure. He won our Gold Medal by incontestable deserts, and received it with an enthusiasm on the part of the givers which had in it no trace of hesitation, for his leadership as an artist was beyond question. To some men, whose utterances in speech and writing are restrained, expression in the tender art of water-colour is a great and rather mysterious outlet of language. This language needs sympathetic interpretation by the reader, but those who have learned and practised such interpretation will admit that George spoke that language. In his own building, and perhaps even more in his able presentation of other scenes, there is a writing which is not far from poetry. The men who can have had any bitter thought of such a character must be non-existent or very rare. Those to whom his kindness of heart, of look, and of voice are treasured memories must be legion. They are a throng to which I, for one, am proud to belong."

A vote of condolence was passed by the members as they stood in their places during Mr. Waterhouse's address.

The Hon. Secretary also announced the decease of Mr. Philip Henry Tree, who was elected an Associate in 1882 and a Fellow in 1890; Mr. Spencer William Grant, elected an Associate in 1879; and Mr. John Herbert Nicholls, elected a Licentiate in 1911.

The regrets of the Institute for their loss were entered on the Minutes, and a message of sympathy and condolence will be conveyed to their relatives.

Mr. A. N. C. Shelley, M.A. Oxon., B.C.L., of H.M. Ministry of Health, then read a paper, of which we give an abstract, entitled:

THE LAW OF BUILDING OUTSIDE LONDON.

The Minister of Health has little concern with London building law; the system by which building is there controlled differs wholly from that in the provinces. The London system is almost entirely covered by direct statutory enactments. These statutes are chiefly administered by officials called district surveyors, who exercise powers given them by Parliament and have no parallel elsewhere.

"Building law" rather than "byelaws with respect to buildings" had been chosen by the lecturer as a title for a special

reason—namely, because byelaws are not by any means the only method of control exercised by the provincial local authority.

In addition there are regulations (not as a rule of very great extent) which are not the same as byelaws. Then there are direct provisions of the Public Health Acts and other Acts, and there are discretionary powers of considerable scope.

It is as well that everyone concerned with building should grasp the distinction between these various methods of control, and it is essential for those to do so who are seeking to reform the present system. Let me explain it briefly. Parliament says that you shall not build a living room above a privy or two back to back houses: these are direct enactments, and a local authority has no concern but to enforce them. Then it says that you shall not bring your building in front of a certain line without the local authority's consent: or that if your private streets are not to the local authority's satisfaction they can require you to make them up; these are *ad hoc* discretions vested in the local authority. Again, the communication of your house drain with the sewer is controlled by "regulations," fixed in advance and so differing from an *ad hoc* discretion, but not the same as byelaws, as you will see in a moment.

When, then, is a byelaw? The byelaws in which you are interested are local laws made by a town council, urban or rural district council, and have no validity unless confirmed by a central authority, originally the Home Secretary, then from 1871 to 1919 the Local Government Board, and now the Minister of Health. And not only must a byelaw be confirmed: it has two other features which are worth remembering. Its making must be advertised in the locality, and it must be open to public inspection for a month before the Minister can legally confirm it. These requirements sound formal, but they have corollaries of the first importance.

It is the nature of a discretion that you do not know in advance how it will be exercised: a byelaw tells you what you can or cannot do. The actual requirement imposed upon the public must lie there in black and white: it must be definite and its terms ascertainable by all. A byelaw which is vague or dubious in meaning is contrary to law. This certainly is one great advantage of a byelaw.

For practical purposes our history to-night can start in the eighteenth or early in the nineteenth century, when, side by side with the old Municipal Corporations, bodies of Commissioners were springing up for the government (in particular) of the growing towns called into being by the Industrial Revolution.

These Commissioners commonly obtained a private Act of Parliament, which endowed them with powers in relation to sanitation and the control of streets and buildings. Hundreds of such Acts were passed between 1750 and 1850.

Thus, by 1840 or thereabouts, almost every town of any size, and many quite small places, were endowed with special statutory powers.

It is an unfortunate fact, mentioned by the Departmental Committee, that some of these sections have remained until the present day, and—good as they may have been 80 years ago—they now block all progress in the particular matters to which they relate in the towns where they are in force. Beware of Acts of Parliament.

In 1848 there was passed the first of the Public Health Acts, marking the transition from the local Act system to the modern system of control. Only ten years later this discretionary system was swept away and replaced by one under which such matters were to be controlled by byelaws, which every urban authority was to be empowered to make. A byelaw is definite, it must be advertised and deposited for inspection before coming into force, and it must be confirmed by some outside authority.

The Act of 1858 was in due course repealed and its main provisions re-enacted, with improvements, by the Public Health Act, 1875, under which (with minor amendments by later Acts) we work to-day. By this Act something like a uniform scheme of governing bodies was created.

The main feature in regard to building is that (subject to certain exceptions by way of direct provision or discretion) control is by byelaws framed and administered by the same authorities.

If local Acts of Parliament can now be eliminated in considering what we want to do in future, the issue is narrowed to a comparison between three other possible systems: the present system, a system of control by a general enactment in more or less fixed terms, and a system of discretions.

The lecturer was convinced that there was no chance, politically speaking, of getting rid of the local authority's control.

Be it under byelaws or under statute, the first step is to submit your plan—and then, according to the critics, the trouble starts. But you cannot really lay down a general proposition and say

thus or thus is how the system works. Some Councils delegate more power to their committees or officers than others: some require every plan to go before a committee and full council meeting: others entrust the passing of plans to a committee: others, in fact, though there may be a later formal stage, allow the surveyor to pass plans in their name. Where the surveyor is a good man this is clearly to the advantage of the architect; he gets a quick decision and, if there be dispute, he can discuss it with a man who knows the technique of the subject. Where the surveyor is not quite equal to his job this is the worst of all systems, for the council having once entrusted wide powers to their officer will be naturally (and rightly) averse from overruling him. There is no doubt at all that in the calibre of men appointed as surveyors there has been a great improvement in the present century, as in most spheres of Local Government. It is inevitable, however, if a decent salary is to be paid that the duties should often be combined with those of other posts. This means that a man may become building surveyor because of his ability in some quite different work. Others, who possess professional qualifications as engineers or architects, do not always become easier to deal with for the private person. It is here that one finds most of the "imaginary byelaws existing only in the mind of the surveyor" of which a witness spoke before the Departmental Committee. But let it not be thought that arrogance is all upon one side. A spirit of reasonable adjustment on both sides would work wonders in many cases of dispute. The ordinary spirit of mutual accommodation which works in business life would work just as well in public life if it got a chance.

And this, whether you have one universal code or 1,700 local codes of building law—one for each district of the country.

Granted that you must have administration by the existing local authorities, or some other authorities which would still be local and still diverse, it has been suggested in some quarters that you might nevertheless apply a uniform law throughout the country. This is attractive, but it is not so simple as it sounds.

It is interesting to note that the original model byelaws of the Local Government Board, prepared under the Public Health Act, 1875, and issued in 1877, were hailed by the Royal Institute of British Architects as suitable to form a general building code. The Local Government Board, their authors, were more modest and were content to leave them, as Parliament intended, to be adopted by local authorities who felt the need of them.

Consider the result if the model byelaws as framed in 1877 had been universally applied by Act of Parliament. There is hardly a clause of that series which remains the same to-day as when it was originally drafted. It is sometimes said that the model byelaws of 1877 are those of the present day, but nothing could be further from the truth. The governing statute is substantially the same, and that decides the framework, but the filling in is altogether different. From time to time there have been wholesale changes. There were several before 1900, again between 1900 and 1912, and in 1912 the biggest of all, which really gave us the model as we have it now, despite further overhauling in 1919 and again this year. But it is not to these general overhauls that one looks for the real improvement of the models, so much as to the periodical reprints when small alterations are made which in the aggregate have the effect of altering the whole. This has only been possible by the byelaw system which has given ground for experiment in every district in the country and has enabled particular local authorities to try suggestions emanating from others or from us or from our correspondents.

One widespread change already has had less attention than it merits, viz., the change in the mode of building factories. Fifty years ago the ordinary factory was built floor above floor, much like a magnified dwelling-house. To-day it tends to break new ground when land is cheaper and to be built on one floor. There are obvious advantages in the handling of goods, the placing of machinery, and the construction of sidings and motor roads. Thus, the structure of walls has ceased to have the same importance. They are frequently mere screens. Mark how the byelaws system adapts itself to this.

Is it not better to keep the matter fluid, and to put up even with some inconvenience from differences between one district and another, most of which are due, when all is said and done, to the spirit of progress which leads a local authority with an up-to-date surveyor to amend its local laws more quickly than its neighbour? In this way you get experiments in one place of which others take advantage.

An Act of Parliament is inherently static, and for controlling a progressive art in the public interest you do not want a static code of law.

There are three codes of model byelaws, the urban, the rural and the intermediate. The names of the model codes are understood, have some foundation in the governing statutes, and are not intended to correspond too exactly to districts technically

classified. The rural model, then, contains primary requirements for the control of sanitation, but it leaves the width and construction of new streets entirely to the person who lays them out, and as regards walls of buildings, it contains only the rudimentary requirements of a damp course and a coping. There is nothing here which could possibly hinder any kind of building.

The urban model is a full series intended for the largest towns which feel it necessary, and can and do provide a skilled staff to undertake detailed control of every kind of building. This deals with new streets and with every type of building, for stability and fire prevention as well as purposes of health.

The intermediate model was originally drafted nearly twenty years ago for rural districts which were becoming urban, but experience has shown that it is equally suited for many districts already technically urban, whose character is mainly residential, and even for industrial boroughs where factory building is in the hands of a railway company or other responsible concern. The typical English country town might well be content with a series of the intermediate scope, in which the main stress is laid upon domestic buildings, and even these are governed in general words rather than in detail. The sanitary provisions are still there for factory and dwelling house alike.

The Departmental Committee thought there ought to be some byelaws everywhere, but it has never been the policy of the Local Government Board or its successors to say that all local authorities required byelaws or to press them on particular authorities in the absence of special evidence of local need. In the earliest days the Board were inclined to the view that if the powers given by Parliament for making byelaws were required at all this was evidence that the locality required the full series—the original series recommended by the R.I.B.A. for universal use. But in the course of time this was found to be unnecessary, and the tendency for a long time—especially since the end of the last century—has been to encourage the adoption of much less, wherever possible, and still to leave without byelaws areas which did not need them.

The mischief hitherto has been that not only have byelaws differed according to the fancy of particular authorities. They have differed so enormously in date.

But once secure a reasonable measure of modernity, and the trouble caused by having the power of legislation vested in the Councils of different districts will largely disappear. So long as the law is in a form requiring the confirmation of a central Government department, it is likely to follow the same mould, and if the central authority receives in the future more backing than it has done in the past from the architectural profession, it will be easier for it to resist demands for exceptional byelaws not related to real needs. It is singular, but true, that almost always where the local architectural profession takes part in discussion of local building byelaws, they are found to support the most extreme suggestions for local divergence, and indeed to press that building should be subjected to even more control than the local authority desired. There is here room for consideration by the great architectural profession of the policy it wishes to pursue. Nothing satisfactory is likely to be done unless the profession can speak with more or less one voice. Surely the interests of architecture were all in the direction of free trade, of allowing the private architect and even the private builder, so long as he does not outrage the public safety, the greatest possible scope to develop his ideas. Local authorities inevitably, and properly aim towards protection, towards imposing a wise restraint, as they conceive it in the public interest, upon otherwise unrestrained development. With local authorities protectionist, and the profession desiring free trade, the central department holding the scales evenly between the two, one should see great hope for ordered progress.

The phrase "appeal against byelaws" is commonly used in support of a most mischievous conception, viz., that it should be open to a person affected by a byelaw to contend that on the particular facts of his own case the byelaw need not be obeyed, whether or not it is reasonable otherwise. Such a power was given by Parliament for a limited period in section 25 of the Housing, Town Planning, &c., Act, 1919. But such a power leads to the retention of masses of obsolete and oppressive byelaws. Parliament itself limited this provision to a period of three years from the passing of the Act; it extended it this year to the end of 1923, and then it will end, unless Parliament otherwise determines. And the lecturer hoped that it will be the last experiment with an "appeal against byelaws" in the foregoing sense. If a byelaw is good, let it be obeyed: if bad, let it be amended so that everyone can benefit alike. To create machinery for avoiding its application to individuals is to abandon the great benefit of certainty, to divide the forces of reform, and to impose upon individuals who are adversely affected the burden of appealing in each case against a requirement which *ex hypothesi* should not be there at all.

That is one sense in which the phrase is used. To others it means something very different, and not open to objection, which has been already recognised by Parliament in the earlier Housing Act of 1909. That Act provides that a byelaw which unreasonably impedes the housing of the working classes may be revoked by the central department, and if those who speak of an "appeal against byelaws" mean that the principle recognised in regard to working class houses should be made more general and made workable in practice, that is, that there should be improved machinery for claiming that a byelaw is unreasonable and ought to be repealed or revoked, I should not object. All the witnesses from the Local Government Board before the Departmental Committee were in favour of such an amendment of the law, and the Committee themselves named it as one of the two matters in which amending legislation was at once required. His Majesty's Government have not, in their other preoccupations since 1918 when this Report was made, been able to introduce a Bill, but here is a fruitful line for the Institute's inquiries to follow, and a remedy which would probably be non-controversial.

It is rather sad that this Report of the Departmental Committee on Building Byelaws, the only attempt made in this country to set out in coherent shape the law, the history and the practice of the control of building by local authorities, should be so little known. It is solid reading and not meant to be taken up in an odd half-hour, but its study is essential to an understanding of the English law of building and to the framing of a system for the future. It might be summarised in a few sentences, thus:—

1. The system adopted in 1858 and since maintained, by which the local authorities who have to enforce the law are also to make the law, has on the whole worked well. No case has been made out for scrapping the authorities or the system.

2. Experience since 1875 has revealed various gaps and possibilities of overlapping which ought to be set right.

3. Experience has, in particular, shown that building law, like every other invention of the human mind, grows old and needs renewal. With the progress of invention that law may grow obsolescent quickly, and it is essential that a central authority in close touch with professional opinion, and in a position to study the practice and requirements of the country as a whole, should be enabled to revoke local laws which have become oppressive.

4. Parliament recognised this in 1909, but the enactment has proved to be so badly drawn as to be unworkable in practice.

If this section could be brought up-to-date and made to work, a large part of the difficulty which now exists would vanish.

The lecturer concluded as follows:—"As far as the central department is concerned, what we want is more co-operation between architects, local authorities and ourselves. We have our avenues of communication with the local authorities up and down the country, and I am glad to think that some misunderstandings are being removed, and that on the whole the tone of the relations between the Department and the local authorities is improving. But we still get much less help than might be possible from the architectural profession, and I should like to end with a plea that architects who find themselves in difficulties should not hesitate to make them known to us. To that, however, I will add this proviso, that first of all they shall try and understand the point of view of the local authority and arrange their difficulties locally. If that proves impossible, let us have information on the difficulty. If it is a matter of interpretation, we may be able, if both sides agree, to decide it one way or the other. If a byelaw is oppressive, we may be able to take steps for its repeal. Nothing can be lost, much may be gained by letting us know in detail what your troubles are. We hear of grievances unspecified, we find on many sides a general and sweeping condemnation; let us have the facts."

DISCUSSION

Mr. W. E. Hart, Town Clerk of Sheffield, in proposing a vote of thanks, said that the Departmental Committee to which allusion had been made, and on which he had served, received very valuable assistance from architects and members of the Institute. Mr. Shelley's paper put forward the fundamentals of their report as interpreted to some extent by his own personal feelings. Mr. Shelley had been far too modest in his references to the report, for its base was the very lengthy and learned document Mr. Shelley had himself prepared at the conclusion of the sittings of the Committee. With reference to the subject in general, it seemed very desirable that there should be as little hindrance and difficulty as possible in regard to the erection of buildings. The easiest way would be to allow each man to do as he liked. Unhappily cases occurred which showed there must be some restriction on such right of individuals. It was obvious that in regard to questions of sanitation, stability, risks from

fire, and such points there must be some regulation. An Act of Parliament would tend to become a danger rather than a help. Personally he objected to entrusting too much discretion to local authorities. There ought to be some rule which applied to all, and allowed no room for favouritism or influence. It must be an advantage if anyone could ascertain exactly the rights and powers under the law, for it would not give scope to other influences which were undesirable. Was it possible to arrive at some common system of byelaws suitable for all the country and having a substratum of uniformity? One could easily sympathise with the feelings of an architect, say, of Birmingham on finding that when he carries out work at Bradford he has to learn the byelaws all over again. Personally he believed some substratum of uniformity to be desirable. He very much hoped it would be competent for the Ministry of Health to draw byelaws closer together. In the past the authorities have been too ready to listen to Surveyor A and Surveyor B as to what was wanted for their respective districts—wants which were very often only a personal whim. If this bringing of byelaws into line were attempted, it would help to make things simpler for all concerned. Variations would be limited to what is required by local conditions and not fanciful ideas. Perhaps Mr. Shelley's address would bring some of the reforms into being. Unfortunately it was so difficult to get such things done in Parliament. Architects ought to co-operate and put their views from time to time before the Ministry, and the local authorities should realise they were the servants of the public and were not there to enforce their own ideas.

Major Harry Barnes, M.P., wondered whether it might not be possible to make some codification of the building laws and so render it easier for the architect to find his way. It was impossible to estimate too highly the value of experiment and the possibilities of progress arising out of the present system. Any proposition that the central authority should be entrusted with greater powers would be pounced upon in the House of Commons as a dog pounces on a rat. It would certainly be necessary to associate the officials with some sort of outside tribunal. If anything of that sort was done, there might be great advantages in strengthening the central officials. As a suggestion he would ask if it might not be possible to arrange that a qualified architect should be expected to supply less information to the surveyor than an unqualified one.

Mr. I. G. Gibbon (Assistant Secretary in charge of the Local Government Division of the Ministry of Health) declared that a great proportion of the complaints received against the byelaws had not, in fact, the least reference to them, and dealt with matters outside such legislation. The basic principle of the old byelaws had been, of course, uniformity. There was now at their disposal a system under which they could secure that measure of elasticity which they desired. So far as the Ministry of Health were concerned, they were only too ready to consider suggestions for modifications in the present system. Local authorities could not be compelled to accept any byelaws which the Ministry might think best. Architects could help by bringing pressure to bear on local authorities for the revision of their byelaws. A backing of public opinion was required.

Mr. Francis Hooper reminded the audience of the work of Mr. Leonard Stokes, their Past President, in backing up Mr. John Burns and producing in his year of office that wonderful town planning exhibition at the Royal Academy which brought before the public what the Local Government Board had in mind. The late Mr. Henry T. Hare, another Past President, seemed on the point of bringing about much needed revision of the law of light and air.

Mr. A. O. Collard said that many of the members wanted a greater uniformity of practice. They realised that the local authorities were the only people to administer the law, and they were prepared to submit to them. But they had all found much embarrassment in meeting variations in different parts of the country. Public officials were to-day undoubtedly of a better class than they used to be. Architects remained still a little fearful of the high officials of Whitehall.

Mr. H. D. Searles-Wood urged that the portion of the London Building Act which referred to party walls had proved so extremely satisfactory that it ought to be extended all over the country. A good point made in Mr. Shelley's paper was the need for closer association between surveyor and architect. For many years it used to be customary for the latter to be very austere with the humble surveyor. During his twenty-five years' experience as district surveyor he made it his business to break down that aloofness.

Mr. W. R. Davidge, Mr. Alban Scott, Mr. Horace Cubitt and Mr. C. A. Daubney having also spoken, the vote of thanks was put to the meeting by the President and carried by acclamation.

Mr. A. N. C. Shelley having replied to the points raised, the meeting closed.

Proposed Improvements in Central London.

By Mr. John Murray, F.R.I.B.A., F.S.I., &c.

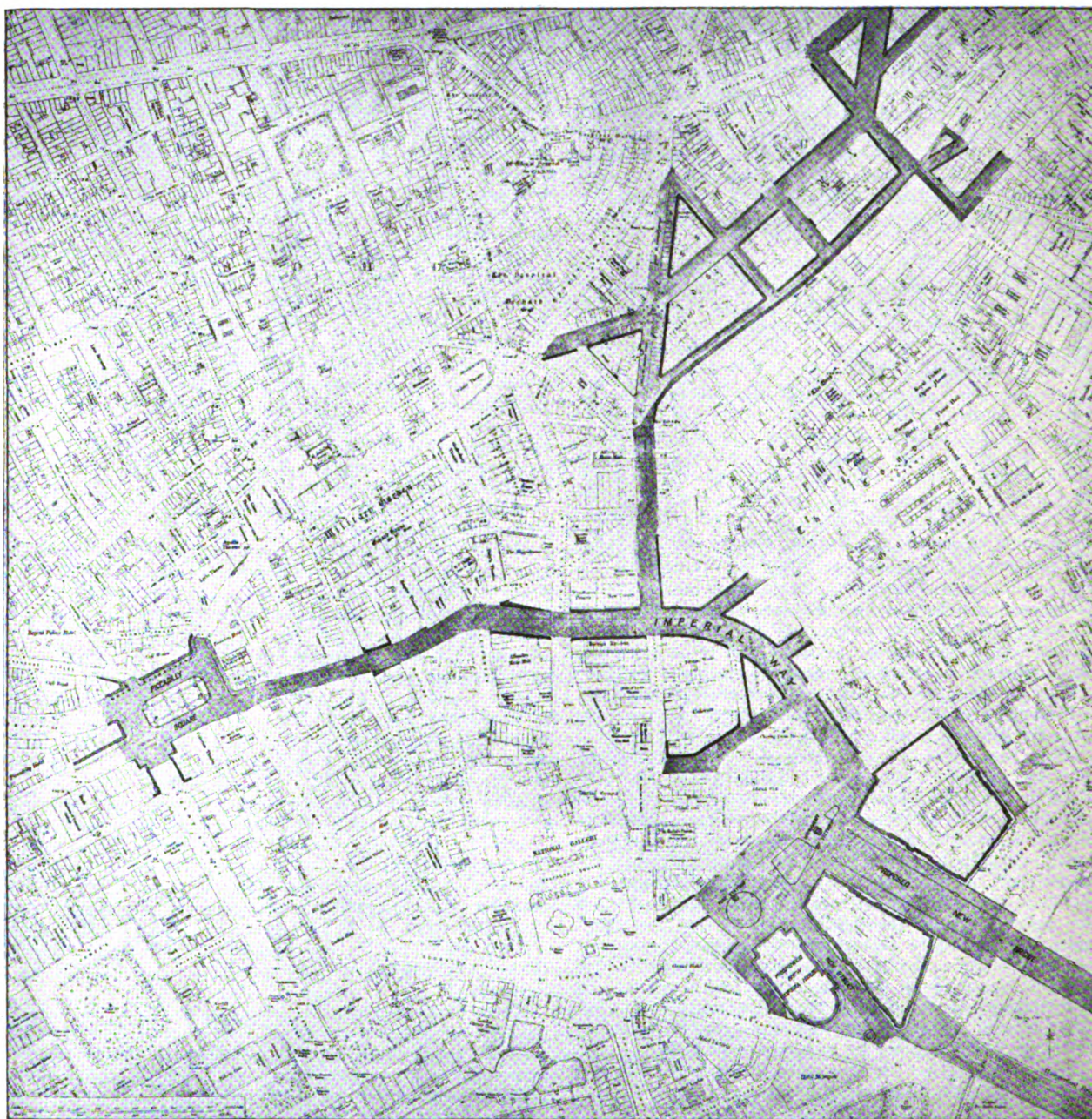
It is generally agreed that a large area north of the river in the Charing Cross district needs development in order to improve traffic conditions and to afford greater facilities for trade even if a new Charing Cross Bridge be not built.

During recent years various independent schemes of improvement have been suggested; but owing to lack of co-operation among the various authorities concerned, little has been carried out.

It may be thought that there is no great likelihood of any large development taking place immediately, but I venture to suggest in order to prevent any further unnecessary interests

It is desirable that a decision be arrived at regarding the necessity for a Charing Cross Bridge, and in the event of it being deemed necessary the position should be agreed upon and further vested interests in that connection restricted.

The street improvements which I suggest would afford additional traffic facilities in the Charing Cross area, and at the same time provide for future traffic across the river by the proposed Charing Cross Bridge should it ultimately be built. The location of the bridge should be fixed with full regard to the best approaches procurable on the north side of the river, for it is to this point that the traffic to and from the proposed



accruing that the problem should be considered without delay by the authorities concerned, including the London County Council, the Westminster City Council, the Holborn Borough Council, the Lambeth Borough Council and the Railway Companies.

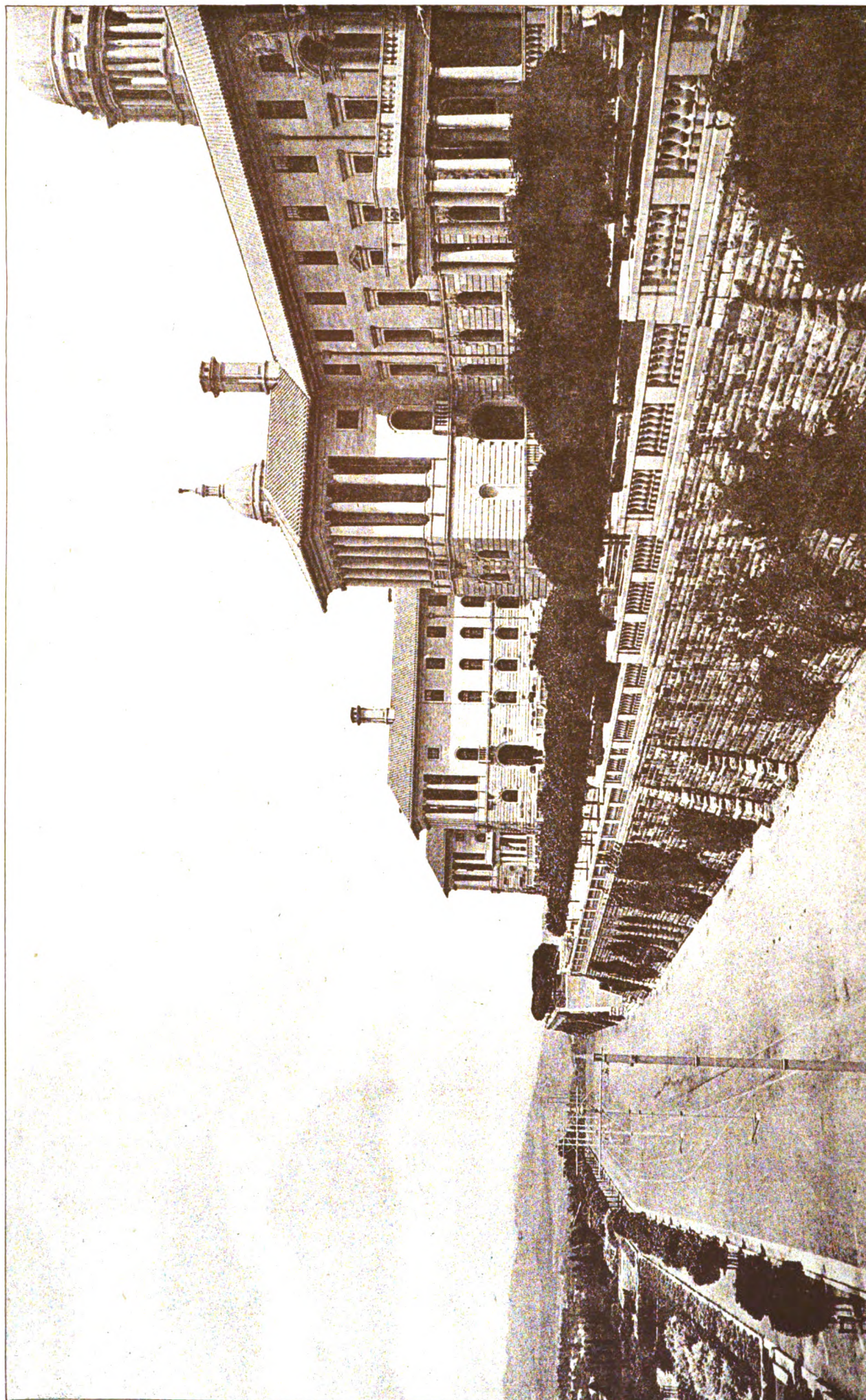
There is a great need for central offices for Colonial trade, similar to those now being provided for America by the Bush Building in the Strand.

These offices could all be erected in the proposed new thoroughfares shown on the accompanying plan, and the opening up of Central London in this way should result in the greatest improvement that has been attempted in the Metropolis since Regent Street and Regent's Park were laid out by the Crown about a century ago and presented to the public under the auspices of King George IV.

new railway station of the South Eastern and Chatham Railway and the existing station of the South Western Railway on the opposite side of the river would converge.

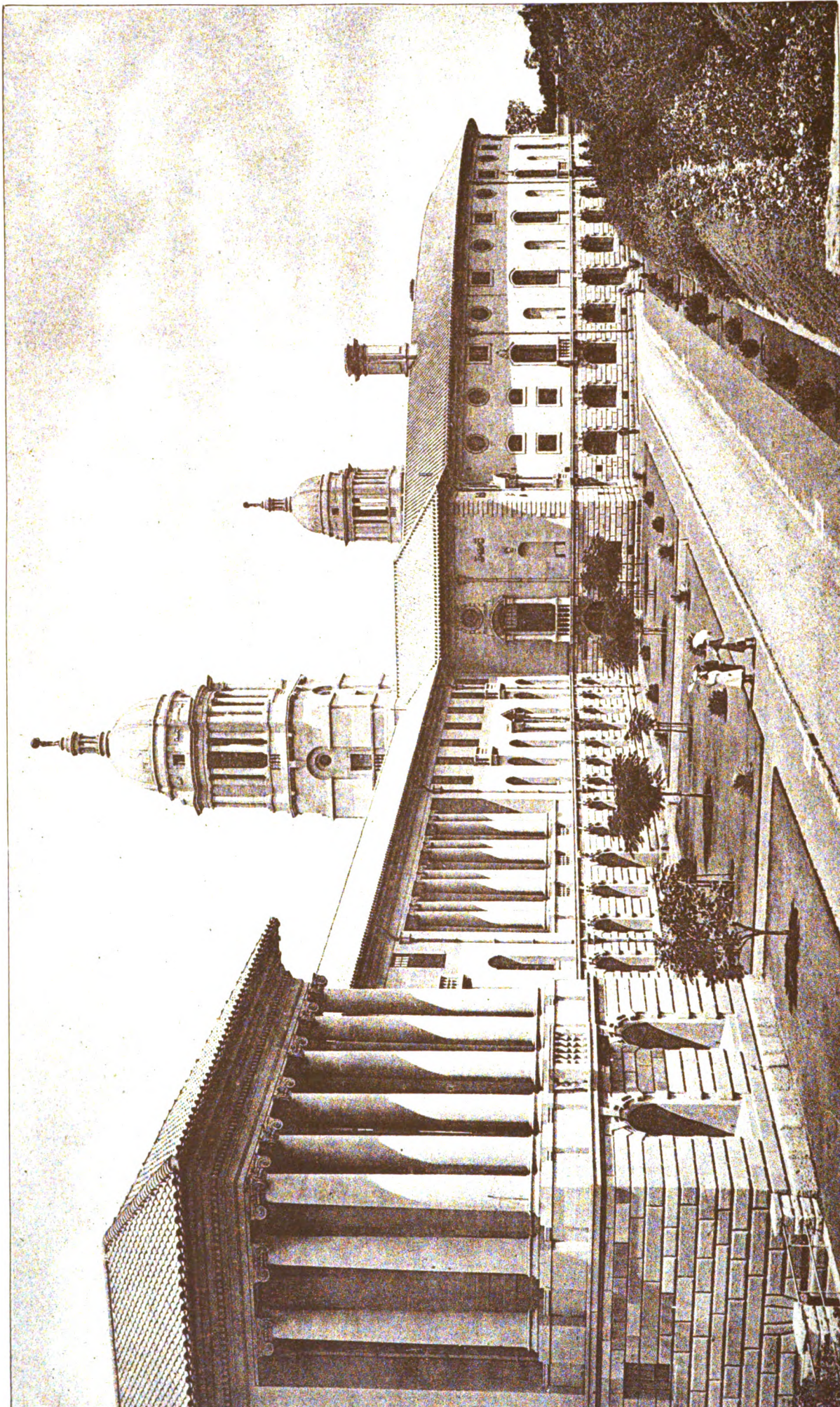
The possible developments in the district that are required in order to accomplish the proposed improvements are very large, but I am convinced that if they were all considered and undertaken in a thoroughly comprehensive and business-like way the whole problem could be solved in sections and largely by private enterprise controlled by the authorities. I also think that if the schemes were all worked out upon sound business principles the capital invested in the improvements on the north side of the river would result in a dividend-paying investment, whilst in addition the benefits to the community would be very great.

The primary essentials are combination of the authorities as suggested above and the raising of the necessary capital.



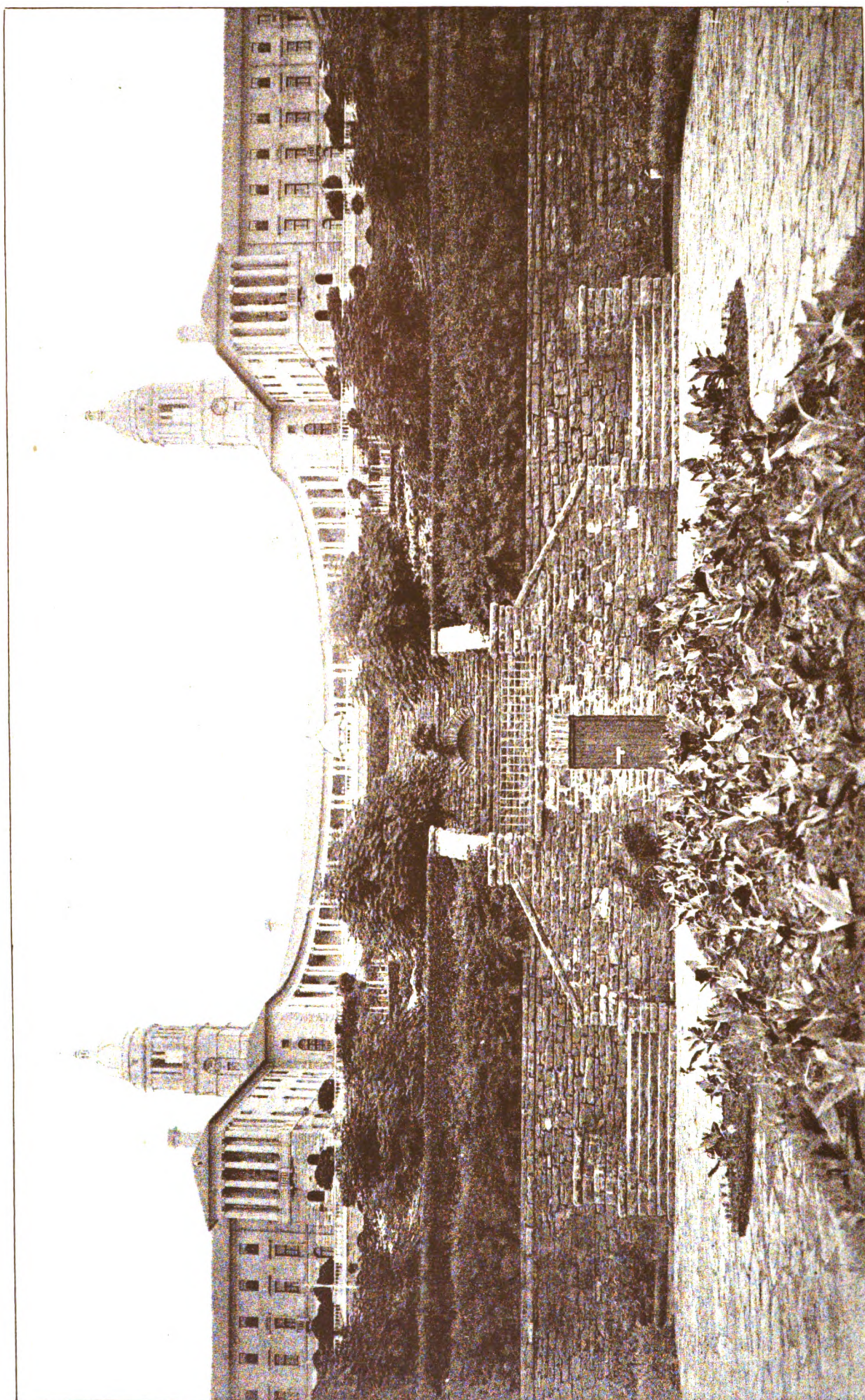
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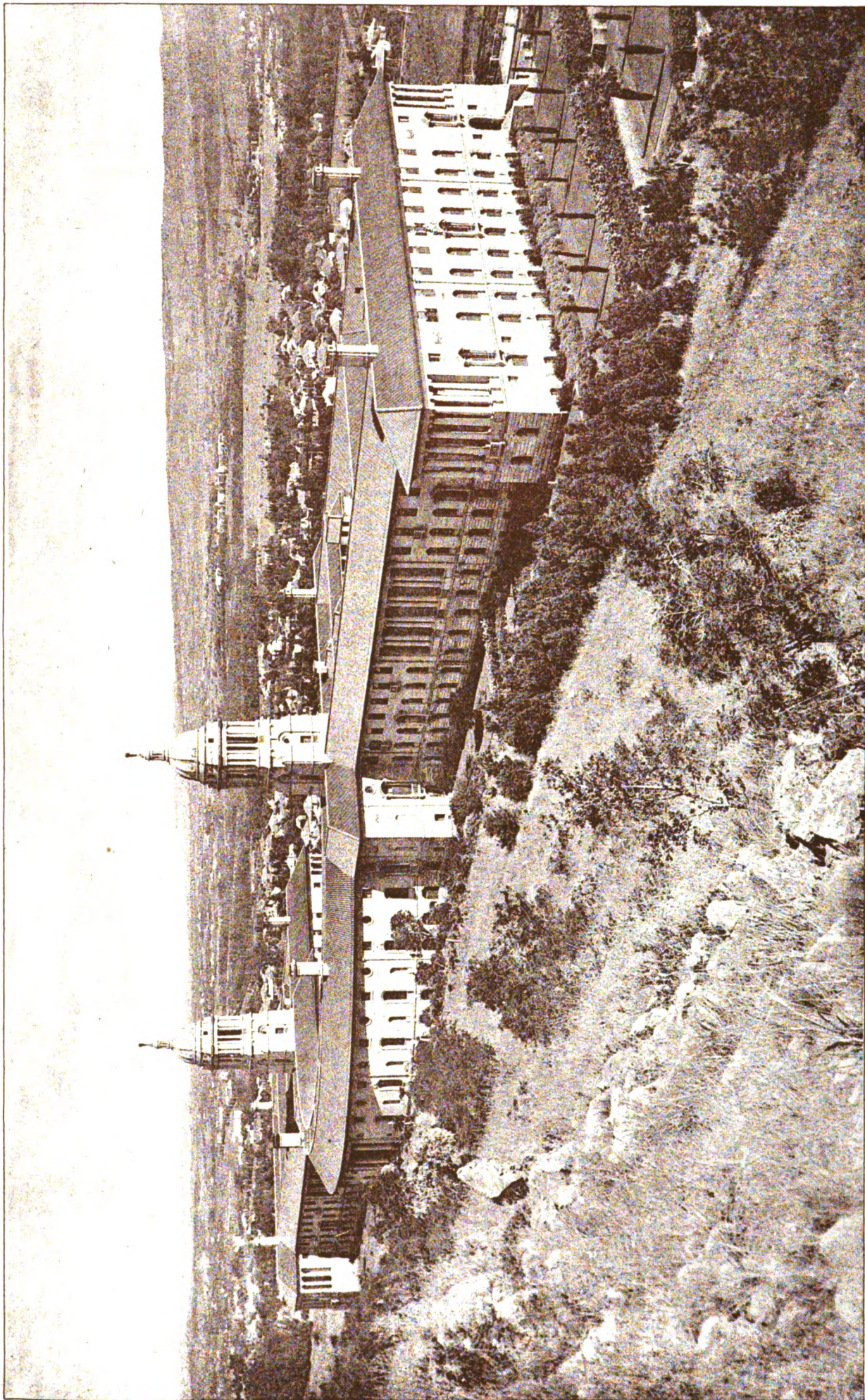
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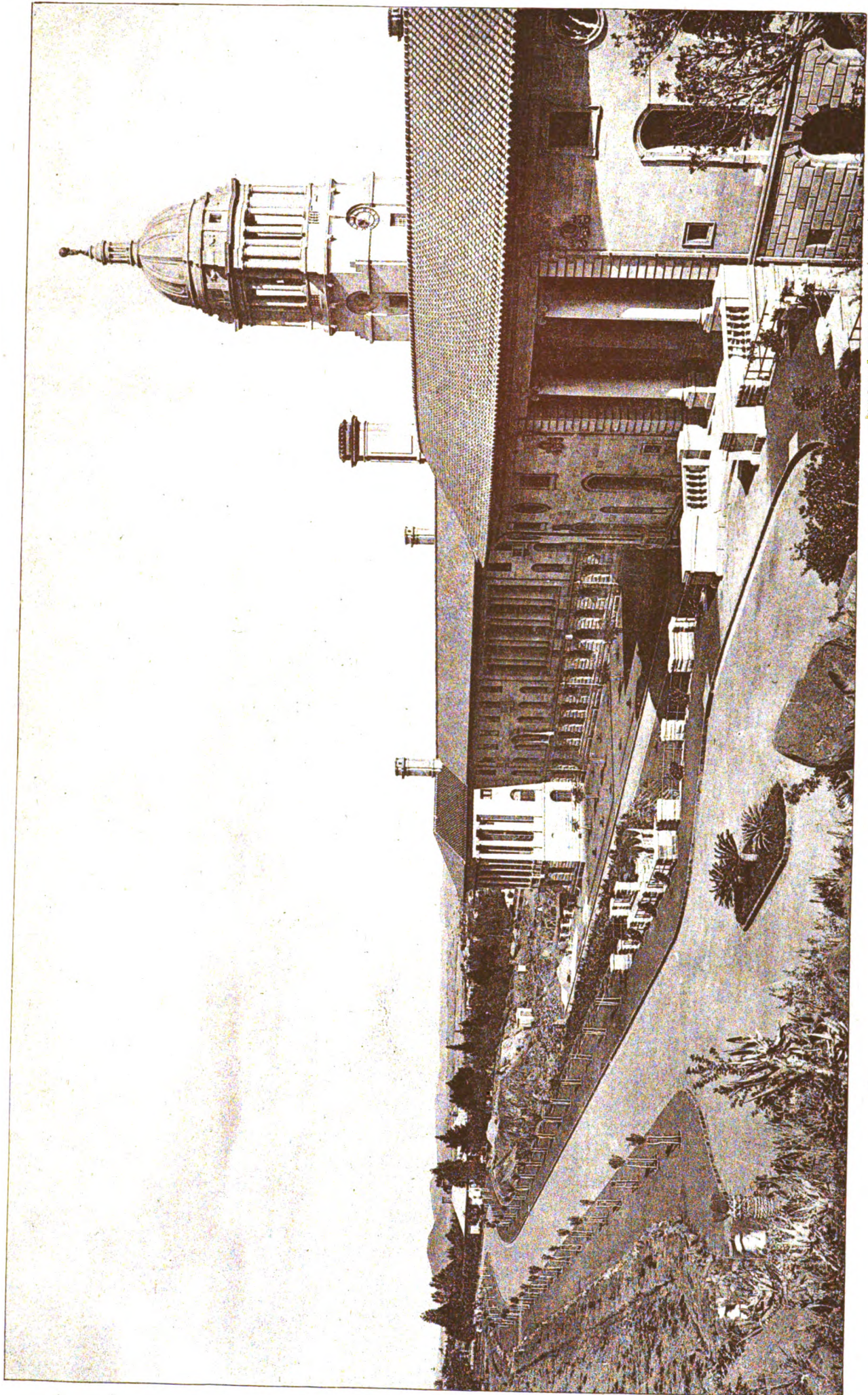
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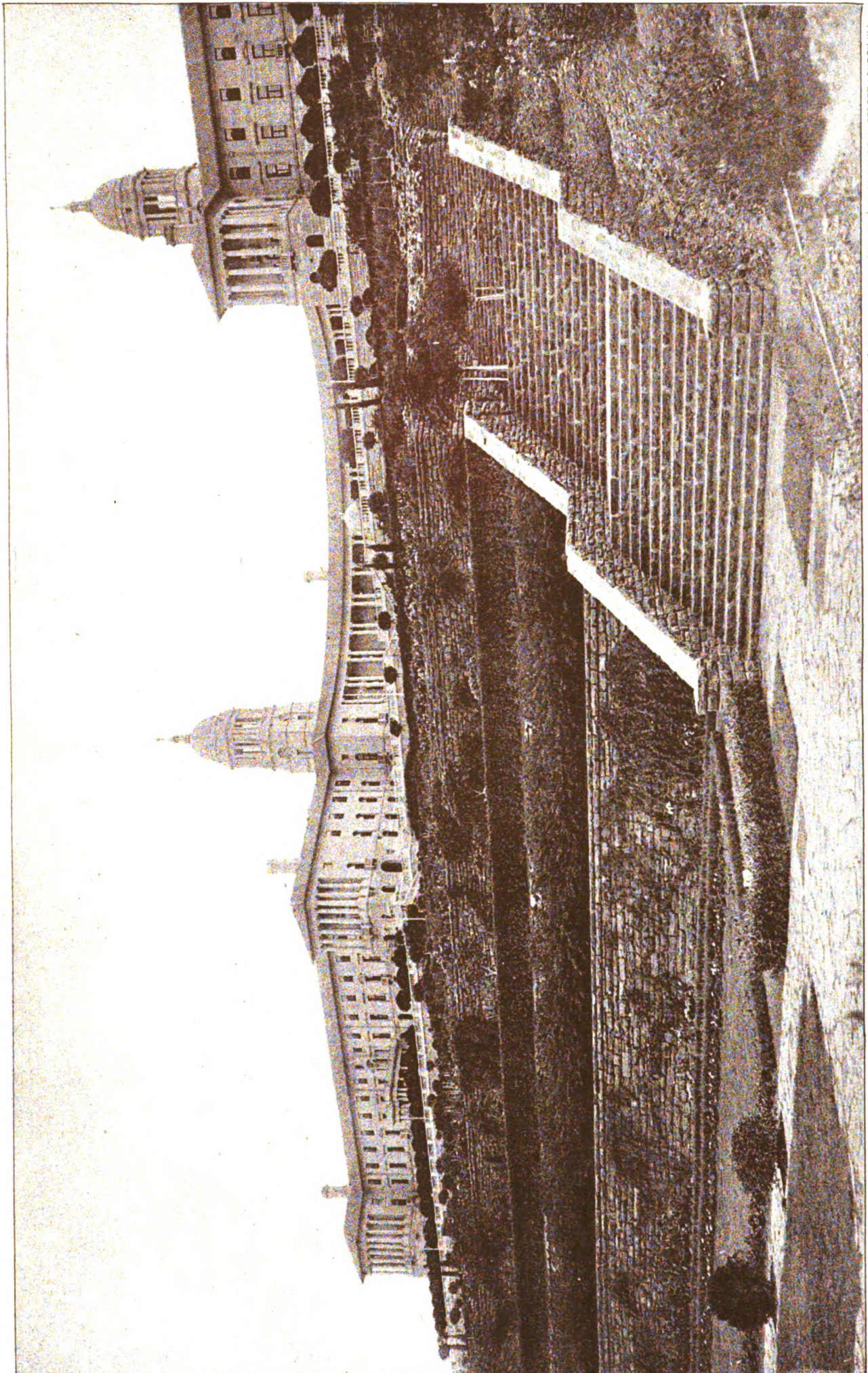
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The amount required would be very large, but thousands of millions have been raised for war, and, I think, for the development of British trade it should be possible to raise the necessary amount of capital on a business basis from private sources if it were approved by the interested authorities and guaranteed by the security of public assets.

If the improvements were undertaken on bold lines, they would, I think, result in a great trade development, not only of London and the country, but of the Empire.

I therefore venture to submit the following list of improvements, as indicated on the accompanying plans, together with some views thereon for consideration:—

1. The opening up of the Charing Cross district around the Strand area by the formation of a large open space or "Place," partly on the site of the present Charing Cross Station, from which could radiate about ten important streets.

2. The enlargement of Piccadilly Circus and the formation of a new large open space, in the form of a new Piccadilly Square, by the removal of the Pavilion Theatre block, etc., from which would radiate seven important streets.

3. The connection of these two open spaces by a new broad Imperial Way running eastward from the north side of Leicester Square across Charing Cross Road and St. Martin's Lane, bending southward, skirting and affording ample additional access to Covent Garden Market, thence down Agar Street, widened on the east side, into the Strand and the new "Place." If, however, the bridge be not built, the Imperial Way would still supply a great traffic need by terminating at the Strand.

4. From about the centre of the "Place" at the Strand, opposite the centre of Coutts' Bank, a new high-level Charing Cross Bridge could, I submit, be best constructed.

It is impossible to provide adequately for the increased traffic from a new bridge solely by the existing roads on the north side of the river, as they are all at present congested by the existing traffic, and a new bridge would be a distributor of an enormous amount of additional traffic.

5. The transference of the present Charing Cross Station to the south side of the river, as proposed by the London Society, would afford full scope for all these great improvements on the north side, and the pedestrian traffic across the river could be sufficiently provided for by motor buses, tube railways and covered ways on the new bridge.

The necessary compensation to the South Eastern and Chatham Railway Company, now amalgamated with the South Western, should not be an insuperable obstacle.

No better position appears to be possible, or smaller site desirable, for the future enlarged South Eastern and Chatham Railway Station than the island site bounded by the southern approaches to Waterloo and Charing Cross Bridges, York Road and the river. There a magnificent station and hotel could be built facing the river, with the two bridges as main arteries leading to and from them. They could, moreover, be completed before the present Charing Cross railway bridge, station and hotel were interfered with in any way.

6. The cost of the new bridge itself, and any compensation for trade disturbance required for the street improvements, if raised by public funds, would not be a serious addition to the rates of the County of London chargeable on the rateable value of 49 millions, and the cost should be fully justified by the additional rates from new buildings, and the increased trade and prosperity which would ensue.

7. The extension of the tube railways from Waterloo Station to the London Bridge stations, in order to link up the traffic from those stations directly with the West End of London.

8. The gradual construction of a system of low-level tube railways from a large central underground station in the Covent Garden area, from which could radiate in practically straight lines tube railways out to the Docks, and to the outskirts of London, extending about 15 to 20 miles. By this additional and quite feasible means of transport the public, and also agricultural produce, could be rapidly conveyed daily between the open country and any part of London, whilst the roads of Central London would be greatly relieved of traffic, and consequently of much wear and tear.

Agricultural produce could be conveyed by road motor traction from the country to the outlying stations. The motor vans or lorries could be run at night on to train trucks and transported to Covent Garden or any part of London, being raised by means of lifts at the stations to which they were consigned. The empty vans or lorries could be similarly returned to the outlying stations and the country.

The low-level tubes, if properly constructed, could run deep in the London clay, under buildings, the river, docks, etc., without any difficulty or detriment to property.

The housing problem could thus be largely solved by building houses in the outlying districts where land would be cheap and rates low.

9. The rebuilding of the old property in Regent Street and the neighbourhood, which is now progressing rapidly, and the additional trading that will be produced thereby will certainly, in a few years, necessitate some substantially increased traffic facilities in this part of Central London.

10. The important road and housing improvement scheme which has been suggested by Sir George Parker for the Holborn district, and is shown on the plan to the north of St. Martin's Lane, could proceed simultaneously, and could connect with the new Imperial Way at the north end of St. Martin's Lane, thus opening up the Holborn district and connecting it directly with the South of London.

11. With the exception of the new station and hotel, the construction of the proposed embankment and the laying out and rebuilding of the property on the south side of the River Thames could be more satisfactorily carried out after the more urgent improvements on the north side and the new bridge are completed. When this is done the value of much of the property on the south side would be very greatly enhanced, and the increased value might be credited to the improvements.

12. Breadth of outlook and the exercising of foresight are necessary in these very important and interdependent matters, and the full consideration of them should not be delayed until the necessity is overwhelming, otherwise additional vested interests, much increased expense and loss to the community would be involved, whilst an early commencement with some of the street improvement work would relieve much unemployment.

13. Properly organised loans spread over a number of years and guaranteed by the authorities should, I think, suffice to raise the large amount of capital that would be needed for the street improvements so far as the property and new streets are concerned.

14. The whole of the schemes could probably be best considered by a special committee to include representatives of all the interested authorities.

15. As soon as a complete scheme is agreed upon for developing Central London to receive increased trade and traffic, the time will then be ripe for considering the provision of additional and efficient transport for additional foreign and Colonial traffic and merchandise in the form of the proposed new Channel Tunnel under the Straits of Dover.

I have ventured to put forward the foregoing suggestions as seen from an architect's point of view in the hope that they may be of some assistance to those in authority, to whom in due course may fall the duty of considering these various important and interdependent problems.

"The Architect" Fifty Years Ago.

DECEMBER 21, 1872.

THE FIRST COMMISSIONER OF WORKS.

We have seen a petition to Mr. Gladstone as Prime Minister, which is being circulated for signature amongst the learned and scientific societies, the purport of which is to call for a change in the office of First Commissioner of Works; and a similar petition is said to have been already prepared and signed, if not actually delivered, by foreigners connected with art and science resident in this country. The remarkable unpopularity of Mr. Ayrton is of course no novel proposition; but whether this form of assault is the right one is another question; and although in the nature of things such a proceeding on the part of men of learning could only be understood as an act of simple good faith, in which a mistake of form might fairly be excused, yet there seems to be something in the appearance of the present movement which indicates at least a deficiency of tact, if not of patience. The parliamentary regime under which we live provides in its own way for the removal of incompetent or otherwise unsuccessful public servants; and this is so well understood that parliament might be not unlikely to experience a feeling akin to resentment against such a proceeding as this, however eminent the promoters may be, as an interference with its own slow but sure constitutional mode of dealing with those who hold office virtually by its own permission. The spectacle of the public patronage of art and science in England being administered by a gentleman who professes to regard both as a kind of nuisance, and who in fact deals with their professors as a minister of the Crown precisely as he may be supposed to have dealt with similar unfortunates a few years ago in the capacity of an attorney—not a barrister—of the Courts of Law at Bombay, is no doubt sad enough; and the mischief that may be accomplished in a very little time by such a mistaken official is no doubt serious enough; but if Mr. Cowper-Temple and Mr. Bromley Davenport, not to say Mr. Odger and Mr. Bradlaugh, can wait, Art and Science can wait too.

Some Principles of Architectural Planning—II.*

By Arthur J. Davis, F.R.I.B.A.

It may be safely said that symmetry has generally been sought for in all fine periods of art, and our mistaken admiration for haphazard compositions is largely due to the idea that these were designed originally with the intention of picturesque grouping. I would warn you to be careful of striving for the picturesque in architecture. It is a delightful quality, but if analysed in most cases it will be found that the result was not premeditated, but was attained by a series of circumstances foreign to the mind of the original designer. I do not wish to be misunderstood on this point. Symmetry, in planning, can only be advisable when the site and requirements are such that this quality can be introduced without undue effort. In many cases, for instance, on a mountain side, or where other special conditions operate, symmetry in planning would be the last quality one would endeavour to strive for. Nevertheless it is often seen that in cases where a geometrical and axial plan should have been considered, a straggling, one-sided design has been preferred with a view to obtaining a so-called picturesque effect. In most cases the result is merely artificial and theatrical.

If we examine the fine architecture of the past it will be found that in all periods symmetry and balance were aimed at, although in many cases special conditions prevented these qualities from being attained. I use the word "symmetry" in the sense that Nature applies it. A rigid adherence to a symmetrical arrangement is seldom, if ever, found either in Nature or in any fine work of art. The limbs of the human body, although symmetrical, are not exactly a pair. No two eyes in a face, although they are disposed on either side of a central axis, are exact replicas of each other. The branches of a tree if left to grow undisturbed will in their mass balance each other in their relation to the trunk, and yet there is variety in each case. Most mediæval cathedrals are symmetrical in their general conception, but their charm, in many cases, is enhanced because this symmetry was not rigidly adhered to. Of the two towers which flanked the nave one was usually built at a later period than the other, and although the principal mass was composed symmetrically the detail is full of that charming variety which Nature teaches us in her own creations is beautiful and true.

Hence I venture to suggest that wherever possible a symmetrical quality is desirable in planning, and believe that the striving after theatrical and picturesque effects, as such, are against the instinctive trend of the creative mind. For the intelligent human being of every race feels himself at ease in surroundings which harmonise with his own construction, and intuitively appreciates the desire to produce order out of confusion.

The criterion of a good plan is the ease with which it can be deciphered without the necessity of its various parts being labelled or marked by titles or sub-titles.

It should clearly show the type of construction the author has chosen to adopt. New portions should be distinguishable from the old, and each individual floor should bear its special characteristic.

In fact, an expert should be able to imagine himself walking through the several departments and services; mounting the stairways, using the lifts, and finding his way about every part of the structure without difficulty or confusion.

I would go further, and say that each part of the ideal plan should clearly denote its purpose, so that it would be easy to find a clue to its destination, and the labelling of the different rooms would therefore be unnecessary. It should even be possible to recognise the type of construction selected as well as distinguish the new parts from the old and the upper from the lower storeys.

Here I would warn you against considering a plan as complete in itself. The good architect will always design in three dimensions. When working out his plans he will consider the elevations and sections which complete them, and at the same time study the constructional and engineering questions which are inseparable from their conception. In other words, he will endeavour to design "in space," and I assure you that the power of composing in this manner is much more difficult than it would at first appear.

Simplicity and directness are essentials of good planning. A sense of proportion accompanied by some skill in the handling of the curved and straight lines, the contrast between thick walls and light partitions, the correct delineation of courts and areas, the indication of vaults, columns and staircases, produce a result which has a charm and harmony of its own. I venture to say

that the beauty of a plan can be as much appreciated as the most elaborate perspective drawing, which, after all, rarely shows more than a particular aspect of the building it is supposed to represent. I have seen plans which in themselves are works of art, and gave me the same intellectual pleasure as would a beautiful picture or a fine group of sculpture.

Up to the present I have been dealing with generalities, but now, by way of illustration, I will take a particular type of building in which three different forms explain the special purpose for which each of them has been created. Let us examine the plans of a Greek temple, an early Christian church and a Mohammedan mosque. In all three we are able by analysis to deduce from the plans alone their special destination and the nature of the ceremonies which would be performed inside each building.

The plan showing the restoration of the Athenian temple of "Niké Apteros," the wingless Victory, enables an intelligent observer to realise that he is examining no ordinary building, but what was in reality the house of the goddess. The statue of the Deity, the treasure, and the religious attributes of her cult alone occupied the interior, the mass of worshippers not being admitted inside. At the same time he would notice that an altar was placed below the colonnade at a lower level. He would naturally and correctly assume that in this case the public were assembled outside to participate in the ceremonies and witness the sacrifices on the altar. Further, he might rightly infer that only the priests had access to the interior, and when religious ceremonies were performed they stood behind the altar in the shadow of the portico.

How different from the pagan conception of a religious building is that of the early Christian Church, as exemplified in the admirable and rebuilt basilica of St. Paul beyond the Walls at Rome. Here the plan shows a large enclosed space under a roof supported on a double row of columns which shelters a multitude gathered to join in the mystic rites of the Roman Catholic Church. Holy Mass is performed on a raised altar placed at the east end of the building, and all the perspective lines converge to this shrine, behind which no layman is admitted. Here are performed ceremonies of a much more delicate and refined nature than those that comprise the brutal slaughter of dumb animals. The priests perform their rites accompanied by music and singing, which sound more effective in an enclosed space, and every attraction that art can devise is introduced to add impressiveness to the ritual. The aromatic fumes of incense alone recall the smoke and stench of burning flesh, which would render the atmosphere of a church unbearable. A great many of these facts become apparent from the study of the plans alone.

If I may be allowed to digress at this point I would like to say that the basilican type of plan is, in my opinion, far the most suitable for a Christian church.

As ecclesiastical architecture developed from modest beginnings to great magnificence, domes, cupolas and almost every known architectural feature were introduced into church design; but what was gained by magnificence was lost in directness. The famous dome of St. Peter's in Rome, and that of St. Paul's in London, however beautiful they may be as architectural *motifs*, are contrary to the logical planning conception of a Christian church. This assertion is borne out by the controversy which arose in both cases between the ecclesiastical authorities and the architects, who were compelled much against their wishes to add to the original Greek Cross plan a long nave necessary to accommodate the congregation, there being no room for them in the space under the cupola. This nave was extraneous to the original design and caused the beauty of the dome to be lost as much from the interior as from the outside.

If we wish to admire the graceful proportions of the majority of the famous domes, the best views are obtained from the side and back streets, the front aspect being greatly marred by the addition of the long nave, which in perspective tends to dwarf their proportions and screen their mass.

Nearly all the plans of Christian churches show bell towers or campaniles. These spires, not required in pagan worship, were in some cases directly connected to the body of the church and in others completely detached. They are typical of Byzantine and Gothic art, and formed one of the most picturesque and striking features in the mediæval landscape.

Now let us return to our subject and take as our third example the Mohammedan mosque. Here a different deduction offers itself: the sacrifices and symbolical ceremonies of the pagan and Christian faiths do not apply. In the large vaulted mosques of Persia and Spain, such as those of Ispahan or Cordova, the main object seems to have been to cover in a simple way a great space for the accommodation of the faithful. The building is much in the nature of a school or university. True, the worshippers kneeling on their carpets, facing the holy city of Mecca, pray to their Creator through the intercession of Mohamet, the

* A public lantern lecture delivered at University College, Gower Street, London, on December 5, and concluded from p. 419.

prophet, but the altar and the sacrifices are conspicuous by their absence.

The Patriarch of the Old Testament, who is something between a priest and a layman, and often a combination of both, here replaces the professional ecclesiastic.

The Mohammedan cult calls for a sacred enclosure, a shelter for the faithful and a fountain for ablutions. Also an indication of the orientation of the Holy City of Mecca, so that the officiating Hodja may turn his face in that direction. The mosque must contain a niche or mirhab at the right of which is erected a pulpit, called the Mimbar, from which he expounds to the faithful the wisdom of the Holy Koran.

In the mosque plan the minaret replaces the bell tower, and its graceful silhouette piercing the azure sky and in strong contrast to the domical shape of the building itself, is one of the most typical and charming features of Mohammedan architecture.

In many Eastern countries large courtyards with a fountain in the centre are attached to these mosques, which are approached through monumental archways and flanked by arcades sheltering from the sun whole caravans of the faithful, with their attendants and animals.

Much as I should like, I cannot go further into descriptions of this sort. All I wish to show you is that the plans of each of these three types of buildings clearly define the purposes for which they have been created, and are alone sufficient to enable us to reconstruct many of the salient features of three distinct and different religions.

One could repeat examples *ad infinitum*, but I think those I have just mentioned are sufficient to illustrate that the first quality of a good plan is to clearly indicate its destination and the requirements of each of its parts.

I will now touch on another matter which, although bearing no direct relation to what I have said, nevertheless is a factor of great importance often overlooked by architects. I am referring to the question of climax and anti-climax. Architecture to be effective should be treated broadly and simply. The onlooker, whether in a city, a garden, or a building, should never be allowed to feel confused or bored. He should be conducted gradually, from his admiration of the qualities of the façade to an equal appreciation of the interior parts of the composition; he should mount stairs without effort and be drawn through attractive vistas to mysterious distant openings. By degrees the simplicity and dignity of the entrance hall should develop into a richer harmony of form and colour, eventually culminating into the crash of the climax, after which he should be left undisturbed to enjoy the beauty of his surroundings. Yet, how often do we see that, not content with obtaining this difficult result, the architect carries his spectator further than necessary, and in wishing to achieve too much disappoints him with an anti-climax. I will give you an example of what I am trying to explain. In Paris the very fine avenue designed to open up the vista of the Hôtel des Invalides from the Champs Elysées is well known. It was thought that Mansard's famous dome should be made visible to all those passing up the wide Avenue of the Champs Elysées, and a very ambitious scheme embodying an avenue at right angles to this thoroughfare was laid out. A magnificent wide bridge, flanked with pylons and statuary, was thrown across the river, and the graceful dome, its gilded ornamentation blazing in the sun, was disclosed in the centre of the background. Surely a sufficient climax to a very fine planning achievement. Now this is where, in my opinion, the authors of the scheme fell from grace. They projected two important buildings on either side of this avenue at its intersection with that of the Champs Elysées, and on one of them, the Petit Palais, the architect was allowed to erect a dome, which, being in the foreground, although of much smaller dimensions, naturally competed with Mansard's masterpiece. Now the visitor to Paris who appreciates the beauty and charm of that city, and is wishful to enjoy the new vista opened up for him, hears that the gilded cupola of the Hôtel des Invalides is an object to admire. He stands at the intersection of the two avenues, and is immediately confronted with the problem of the two domes. If of a logical frame of mind, after having rubbed his eyes and assured himself that he has not lunched too well, he naturally resents that it is left to him to decide which of these two cupolas is the one mentioned in his guide book.

I think most of you will sympathise with him in his dilemma and agree with me that it would have been preferable to have had only one of these features in the composition. All the perspective and vanishing lines should have converged on the climax, and nothing should have been allowed to divert the attention of the spectator from the main issue; in other words, an anti-climax should have been avoided.

This kind of mistake is made so often that I cannot sufficiently warn you to be on your guard against it. The leaving of the Marble Arch in its present position, after having rearranged

the surrounding roadways, thus isolating it in the centre of a stream of traffic, results in an anti-climax. The inclusion of a row of small windows lighting the corridor to a set of offices above the three monumental archways at the end of the Mall is an anti-climax. How much finer the great museums and other educational buildings now hidden in South Kensington would have looked had some imaginative scheme been put forward to develop the south side of the river and group them on the left bank between the Westminster and Blackfriars bridges. That this could have been done without undue difficulty has been proved recently by the way the London County Council have acquired the wharves and warehouses which originally occupied the site of the County Hall. The advantages would have been numerous.

The Thames might have recovered its former importance as the great waterway of the Metropolis. The southern districts could have been developed into a Latin Quarter for students and without any great outlay of public funds. A magnificent ensemble might have been created worthy of the great Metropolis.

Instead of this we have to content ourselves with the undignified setting of the Imperial Institute, with the important neighbouring buildings all huddled together without any attempts at architectural grouping in the residential neighbourhood of South Kensington.

One could go on citing examples without end of this failing in logical conception. Whenever we plan something in a noble and definite way and suddenly forget our original purpose and finish off in a mean and small fashion, we produce an architectural anti-climax. It means indefinite vision and lack of a sense of proportion. This fault is not only too often apparent in the lay-out of our cities, but we constantly find it spoiling individual buildings. Do we not frequently see a staircase conceived with great elaboration leading up to an ordinary bedroom floor? Gigantic entrances and vaulted galleries flanked with columns and architectural features ending in a cul-de-sac? Great reception rooms covering large areas of floor space conceived with insufficient height to give them the dignity necessitated by such extravagant planning, and an elaborate display of decoration in positions where it cannot be appreciated owing to lack of natural light. The more one examines the question the more one realises that buildings please either singly or in groups, in that they appeal to our natural instincts, which are simple and direct.

Architecturally speaking, it can be safely stated that for every site, whatever may be the area and surrounding conditions, there is but one ideal planning solution; there may be sometimes an alternative, but there are seldom three equally good schemes to a given site. It is the fortunate artist with a talent for planning who will discover the most efficient and economical way of dealing with every architectural problem. Each case must be treated on its own merits, but certain rules can be stated to guide the inexperienced. It is usually advisable before going into details of the plan to decide which portions of the site should be left open and which covered in, and these divisions are usually more easily defined on one of the upper floor plans. On irregular sites which so often occur in our cities and which are surrounded by party walls at awkward angles, possibly pierced by windows with rights of light, it is best to allow these bad shapes to be lost in the courts and areas and to endeavour to bring the straight and architectural lines away from the neighbouring walls. When changes of axis are necessary curved shapes can be adopted with advantage. A circular or oval vestibule will often disguise an awkward turn, as these curved shapes enable one to place openings at any part of the circumference, and serve as rotulas on which the axis may swing.

On the other hand, in the country where the value of the land is less and light and air are more easily obtainable, internal courts and basements should be avoided, and the formality of the city plan should give way to a more free and scattered grouping.

Here the questions of aspect and prospect are of more importance. The natural features of the landscape and the screening of the house from the prevailing winds should be important considerations in the architect's mind.

In all good plans the type of construction chosen should be readily discernible. We often hear that with the modern methods of skilful engineering everything can be constructed. This is partly true, but it does not follow that everything can be constructed economically, so that even with steel frames or reinforced concrete a straight run of columns and rectangular bearings not only make for economy but enhance the value of a good plan.

In modern buildings, such as hotels, blocks of flats, warehouses, stores, etc., the use of lifts is general, and, as a result, the monumental staircase has practically disappeared. Few people

would choose to mount many steps even of a beautiful staircase if they had a lift at their disposal. Staircases are, therefore, becoming more and more a means of escape in case of fire, and are seldom used as approaches to the upper floors; hence the introduction of the great stairways so often seen in students' designs is obsolete and should be avoided. Lifts should be planned in positions where their access is visible. They should be designed preferably in pairs so that if one is not available the other can be used.

Now for a word about an architectural programme. A thorough comprehension of the programme is half the battle. I need not impress upon you that the most difficult thing in the process of planning is to become thoroughly acquainted with all the aspects of the problem with which we are confronted.

In some cases such as public competitions, a programme will be supplied, in which case it is only necessary to analyse it, discover the important factors and arrange them in their order of importance. But it often happens that our clients are themselves unable to supply us with the information we require in such a fashion as to clearly indicate their needs, or it may be that the building itself is of a type never before contemplated; the architect must in these instances make his own programme and marshal his own facts, never losing sight of the important requirements, and leaving the wealth of detail which invariably accompanies any architectural problem to be dealt with later in the general course of study. I have seen so many plans not only composed by students but even by architects who boast of some experience, where mistakes of the kind mentioned above have occurred, that I feel no compunction in giving force to the principles I have been expounding.

Logic and sincerity are the two all-important qualities we must apply if we wish our plans to reflect our individual interpretation of what is fundamentally true in the aims and requirements of our age. In ancient examples we may seek for aid and inspiration for the detail of our elevations and internal decorations, but in our plans all attempts at disguising the essentials, any insincerity and hesitation, will at once detract from their practical, and consequently from their artistic, value.

When we realise the lasting quality of our productions and that in our work success or failure takes on a more indestructible form than in almost any other sphere of human effort, we should endeavour in every way to make ourselves worthy of the great educational responsibility with which we architects are entrusted, so as to guide and inspire our contemporaries in an intelligent appreciation of the greatest of all the Arts. Our aim should be to leave to our descendants, as our predecessors left to us, buildings which will reflect the life of our times in its minutest details as well as in its noblest aspirations.

Correspondence.

Do it with Tiles.

To the Editor of THE ARCHITECT.

SIR,—It is a pleasure to me to scan through your excellent paper every week on its delivery, and if I do not contribute more often, as I am often prompted to do, please put that down to my advancing age and domestic claims of a large family of sons and daughters and grandchildren.

With regard to curing draught in a chimney of a wing built out beyond the main building of my spacious house: many years since, when we realised the terrible cost of fuel for kitchen range and for independent heater for our domestic hot water supply and radiators, the fire in the range was discontinued, for another reason—i.e. the smoke when the wind was blowing strongly from the south-west was incurable, so it appeared. I purchased iron cowls of various patterns, all of which, being subject to the atmospheric pollution for which Birmingham is notorious, rapidly corroded and fell down, or were removed to avoid danger to the roof or persons below.

I now contemplate cutting out the radiators and installing at the side of the kitchen range a Beeston boiler, to ensure hot water in the morning, instead of the cold radiators making the circulation of water from the hot water tank useless for this purpose. Here I may say that our Welsh water soon injures wrought iron fittings, but cast iron is practically exempt; for this reason radiators, and the coil, boiler, or other heater, are uninjured by the action of the soft Welsh water, because in a radiator the water does not necessarily circulate as it does in the domestic hot supply from which water is being all day long drawn off, and consequently fresh water drawn into the system. Moreover, it will not be necessary for a maid to descend into the basement under the kitchen to feed the heater with fuel: more

often than not this was not done regularly—out of sight, out of mind. Or if more coal were piled on and the dampers opened, soon the whole thing was red-hot.

All now seems plain sailing: assuming the price for installing, and connecting up to existing pipes with new, where needed, proves reasonable. Now we are up against the old trouble of a smoking chimney: what am I to do? The conflicting claims of chimney-pot makers are as various as prescriptions written by an equal number of medical consultants: none would compare: some would be incompatible, others absolutely contradictory; so I fall back upon your larger experience, and that of your readers. Whose chimney pot is the best, least destructive and of most reasonable prime cost?

No chimney cowl of galvanised iron would be entertained by me. I must say, though as yet untried, I favour a strong burned clay pot, easily swept, without moving parts, made in one piece, and to exclude rainstorms as far as possible. Is there such a one readily available of local make, do you know?

Your correspondent, in "Do it with Tiles," has provided for my reading a great treat. Both letterpress and illustration combine to produce a fascinating article: for one likes to be taught when teachable, as I trust I always have been and may ever be. May I suggest that atmospheric conditions which obtain in some southern countries render tiles more suitable, whereas, in this damp cold country, treatment which suggests more warmth may be more appropriate (however, for living rooms)? To walk all day on a tiled floor would deprive one of vital heat. Indeed, tiles might well be colder than a floor of concrete. But for buildings in constant use, such as a restaurant in a busy railway station, either tiles or marble slab facings are a virtual necessity. First cost weighs but little when cost of renovating any other treatment is considered, together with the inevitable interruption to business incidental to renovating painted surfaces. Passages and halls, lavatories, larders, laundries, etc., demand such flooring in the dwelling-house, for reasons of hygiene. For fireplaces, again, tiles are ideal treatment. May I venture to suggest to practical men amongst your readers that they may look in vain for glazed tiled surfaces which do not show any signs of serious crazing? I believe this evil is due to preventable causes. In my opinion it is in the faulty preparation of the walls—especially new ones—that the cause of the mischief may be located. Specifications are too often written by persons who are without that practical experience which the conditions demand. Screeding with old stock Portland cement and clean washed grit without a trace of sea-sand is imperative. To render cement fit for this special purpose, as well as for fixing the tiles to the screeded walls, such cement should be laid out on the floor of a dry cellar for the heat to be dissipated: this is a question of time. Moreover, if tiles be fixed by sub-contractors to whom this work is sub-let by piece-work or by the yard superficial, all such persons should be watched to see that they use such old cold cement: I have known them to accidentally wet the cement by allowing it to stand in a position where water could gain access, with the result that their suitable old cold cement was rendered useless, and then, without the contractors' knowledge, new fiery cement was got in and used, the result being serious crazing, cracking and falling off the walls at a later date—too late, however, to allow the possibility of recovering the cost of renovations from the guilty parties. Also, loamy sand should be avoided, and a clean washed sand, such as that from Leighton Buzzard, alone used in the correct proportion of, say, two of sand to one of the old cold cement. Any clerk of works who insists upon such precautions must be prepared for open or secret abuse at times.

The above remarks apply in a particular way to the fixing of Opalite or glass tiling, the key of which consists of glass grit fluxed to the back of the glass before it is cut into tiles of required sizes. Such tiles can be readily bent in the kiln to form internal or external angles, to fit together with great precision. Indeed, where dampness is known or suspected, Opalite should be fixed with best fireproof white cement such as that made at Cotehill, near Carlisle, and the above precautions rigidly insisted upon when screeding the walls. In closing, let me remark that I am not now in business and I have no axe to grind, nor goods for sale, nor time to waste, but I might be able to explain to you any points upon which my letter may be wanting in clarity.

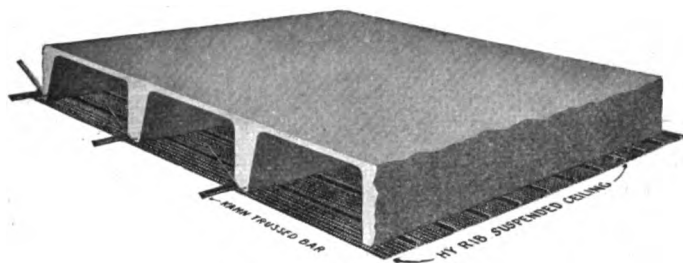
Experience alone teaches how to fix tiles successfully, so young architects would do well to disclose their lack of knowledge to an expert practical man, and do so before they send out defective specifications. With compliments—Yours, etc.,

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Architect's Fees for State-Aided Housing Schemes.

The Ministry of Health and the Tribunal appointed by the R.I.B.A. are anxious to obtain a settlement of all claims for architects' fees in connection with State-aided housing schemes without further delay. Architects who still desire the assistance of the Tribunal are therefore requested to apply to the Secretary of the R.I.B.A., 9 Conduit Street, W., on or before December 31, 1922. The Tribunal cannot undertake to deal with cases submitted to them after this date.

Royal Institute of British Architects.

The following are notes from the minutes of the Council meeting held on December 4:—

The Federal Council of the Australian Institutes of Architects:— Under the provisions of the Charter and By-laws, the Federal Council of the Australian Institutes of Architects was admitted as an Allied Society of the Royal Institute.

*The University of London:—*Mr. Paul Waterhouse and Mr. Arthur Keen were nominated for reappointment as representatives of the Royal Institute on the Architectural Education Committee of the University of London.

*The Joint Archaeological Committee:—*Mr. E. P. Warren, F.S.A., was appointed as representative of the Royal Institute on the Joint Archaeological Committee.

*Retired Fellowship:—*Messrs. Harry Sirr, W. M. Dowdall, and C. H. Brodie were transferred to the class of Retired Fellows.

Victoria and Albert Museum.

The Victoria and Albert Museum has recently acquired a very valuable collection of decorative woodcarving, numbering upwards of 350 examples, which was formed during the course of many years by Sir Charles Allom and has now been presented by him and by Lady Allom as a memorial of their son, Lieutenant Cedric Allom, Royal Field Artillery, who died of wounds at Ypres on October 20, 1917.

The collection includes a considerable variety of panels and portions of panels, frames of doorways and windows, pilasters, capitals and other details of decoration, many of them showing indications of the original gold or colour. It ranges in date from the Gothic period to the end of the eighteenth century; and though the predominant styles are French of the time of Louis XIV. and the Regency, later French work is well represented, as well as English decoration of the seventeenth and eighteenth centuries.

In many cases types hitherto unrepresented in the Museum collections are now made available; and, as a whole, this generous gift furnishes far more than the nucleus of an index to the study of the art of decorative woodcarving during the periods covered, and for this reason will be of the greatest value to students and craftsmen. The collection is exhibited for the present at the west end of the West Hall of the Museum.

Trade Notes.

Messrs. Burberrys, of the Haymarket, the makers of the well-known weatherproofs, universally known as the Burberry, announce the opening of their annual sale on New Year's Day, January 1. The price of the Burberry weatherproof is reduced to £3 13s. 6d., thus bringing it within the reach of all.

Messrs. Goddard & Smith, 22 King Street, St. James', S.W., offered to auction at their head offices and estate auction hall on the 19th inst. the important property known as Imperial Court Estate, Nos. 13 to 27 Brompton Road, S.W. The premises are let and produce a rental of £9,550 per annum. They are held from the freeholder for a term of 70 years unexpired at a ground rent of £3,700 per annum and were sold by Messrs. Goddard & Smith for the sum of £98,000.

In the new warehouse for Messrs. John Stevenson & Sons, Ltd., Cumberland Street, Manchester, the whole of the constructional steelwork (some 200 tons) was supplied and erected complete by Messrs. Homan & Rodgers, 10 Marsden Street, Manchester, Messrs. W. T. Gunson & Son, Manchester, being the architects. Messrs. Homan & Rodgers also carried out the structural steelwork and fireproof flooring to the new Secondary School, Farnworth, near Bolton, under Mr. Henry Littler, architect to the Lancashire County Council. Another contract of this firm was for the reinforced concrete balconies to the Palace Cinema, St. Anne's-on-Sea, and Hale Picture House, near Altrincham, Cheshire. Mr. W. Thornley, M.S.A., of Blackpool and Wigan, was the architect.

General.

The Cardiff City Council have agreed to the erection of an additional power station. The cost is expected to be under £150,000.

The South Kirkby, Featherstone and Hemsworth Collieries, Ltd., are negotiating with the Hemsworth Urban Council as to the purchase of a site of about eleven acres for the purpose of erecting houses.

According to the Minister of Labour, the number of skilled and unskilled men engaged on assisted housing schemes of local authorities and public utility societies on January 1 this year was 116,599. The number on December 1 was 27,993.

Hatfield Main Colliery are negotiating for the erection of several hundred more houses at Stainforth, and notice has been given to the Council that 50 per cent. of the new sewage scheme will be required to deal with sewerage from the houses.

The scheme for providing an electricity station at Stourport is to be put in hand at once. Arrangements have been made with the Government to advance a sum of £600,000. The site is near the Severn and Stour, and will be about 60 acres in extent.

Kirkcaldy Presbytery recently approved of plans for the erection of a church at Methil, the gift of the Baird Trust, at a cost of £20,000. The plans showed accommodation for 852 persons. Work is expected to commence early in the new year.

The late Mr. Septimus Cecil Searle, A.R.I.B.A. (68), of Paternoster House, E.C., and of St. Margaret's-on-Thames, managing director of the Perpetual Investment Building Society, and senior partner in the firm of Messrs. Searle & Searle, left estate to the value of £5,944.

A site for a new Glasgow Ear, Nose and Throat Hospital has been acquired at the junction of St. Vincent Street, Elmbank Street, and Bothwell Street, and the directors are aiming at raising a sum of £50,000, necessary for the building and completion of the hospital.

Mr. Charles Nicholson, of Fenham, Newcastle-on-Tyne, slate merchant, Past President of the Master Slaters' Association and for many years a judge at the Welsh slate splitting competitions, who died June 5 last, left estate of the gross value of £37,413, with net personality £19,603.

The President and Council of the Royal Academy have purchased, under the terms of the Chantrey Bequest, the collection of 13 cartoons and 60 drawings by Alfred Stevens, for the decoration of Dorchester House, which were in the possession of Lieut.-Colonel Sir George L. Holford, K.C.V.O.

The Conway Council have decided to repair, at the cost of some £250, the last remaining arch over the banqueting hall in the Castle. There was another in position until some 22 years ago. A representative of the Ancient Monuments Commission inspected the existing arch, and asked the Council to take prompt action.

The Sheffield City Council on the 13th inst. approved a suggestion of their Advisory Committee for the erection of a cenotaph or war memorial at the bottom of Barker's Pool. It was decided to engage the services of Mr. E. Vincent Harris (the architect for the Sheffield War Memorial Hall), this being adopted by a majority after an amendment that a local competition should be organised had been lost.

At the quarterly meeting of the Bath and Wells Diocesan Board of Finance the Church Building Committee drew attention to the persistent and growing practice on the part of bell-hanging firms of condemning old timber bell cages irrespective of their true condition, and the Parochial Church Councils were advised to scrutinise carefully the proposals of such firms and to call in the advice of an experienced architect before agreeing to drastic and expensive schemes which might possibly be uncalled for. The committee was also strongly opposed to the unnecessary mutilation of ancient bells.

At the recent meeting of the Royal Institute of British Architects there were elected 15 Fellows, 141 Associates (including three women), 2 Hon. Associates and 9 Hon. Corresponding Members. The Hon. Associates were E. Hudson and C. E. Keyser, M.A., F.S.A., F.S.A.Scot., F.R.Hist.Soc., F.R. Soc. of Litt., J.P., D.L., President of the British Archaeological Association, Aldermaston Court, near Reading. The Hon. Corresponding Members were E. Arnaud, director of the Teaching of Construction, Ecole des Beaux Arts, 11 Rue de Téhéran, Paris (8e); D. Barber, 101 Park Avenue, New York; Professor W. Emerson, Director of the Department of Architecture, Massachusetts Institute of Technology, 491 Boylston Street, Boston, Mass.; B. G. Goodhue, 2 West Forty-seventh Street, New York; T. Hastings, Royal Gold Medallist, 1922, 52 Vanderbilt Avenue, New York; E. Hébrard, Grand Prix de Rome, 1904, 23 Rue Jacob, Paris (6e); Dr. A. Kogurf, Professor of Architecture at the Tokyo University, Japan; C. A. Platt, 101 Park Avenue, New York; Commendatore G. P. Stevens, Director of the American Academy in Rome, Porta San Pancrazio, Rome.



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FRIDAY, DECEMBER 22, 1922

Owing to the increasing demand for back numbers we are compelled to give the following notice:—

All numbers for the past twelve months 9d. each, previous to that date 1s. each.

TENDERS, &c.

* * *As great disappointment is frequently expressed at the non-appearance of Contracts Open, Tenders, &c., it is particularly requested that information of this description be forwarded to the Office, Imperial Buildings, Ludgate Circus, London, E.C., not later than 2 P.M. on Wednesdays.*

CONTRACTS OPEN.

ABERCORN.—December 30.—For erection of 36 additional three-storey tenement houses at Abercorn, for the Edinburgh City Council. Messrs. Fairlie, Reid and Forbes, architects, 14, Randolph Place. Mr. J. D. Gibson, F.S.I., surveyor, 60 Frederick Street, Edinburgh.

ARMLEY, LEEDS.—Covering.—For all trades except plasterers for covering over of yard in Hall Lane, for Messrs. Charles Hepworth & Son. Mr. J. A. Webster, architect, 12 Henley View, Hough Lane, Bramley.

AYLESBURY.—January 3.—For the construction of concrete foundations, &c., for the new electrical plant at the Electricity Works, Exchange Street, for the Town Council. Mr. W. H. Taylor, borough engineer and surveyor, Aylesbury.

BATH.—December 30.—For erection of 50 houses at Englishcombe Park, of the parlour and non-parlour type, for the Corporation. Tenders may be submitted for either one pair or block of four or six, or for the total number to be built. Send application and £1 ls. deposit to Mr. A. J. Taylor, F.S.Arc., architect, 18 New Bond Street, Bath.

BIRMINGHAM.—January 1.—For building a fire station on a site between Ettington Road and Prestbury Road and adjoining the Aston Commercial School, for the Watch Committee. Send application and £5 5s. deposit by January 1 to Mr. H. H. Humphries, M.Inst.C.E., city engineer and surveyor, Council House, Birmingham.

BRADFORD.—For any or all of the various trades required in the erection of picture house, North Wing, Bradford. Messrs. Moore & Crabtree, architects, Queensgate Chambers, Bradford.

CARLISLE.—Shop, &c.—For any of the trades required in connection with the erection of a shop and house for Mr. Gaddes. Mr. T. Taylor Scott, architect and surveyor, 36 Lowther Street, Carlisle.

CHERINGTON.—January 1.—For adaptation and repairs to three cottages and four sets of farm buildings at Cherington, near Shipston-on-Stour, for the Warwickshire County Council. Deposit £2 2s. Mr. A. C. Bunch, F.R.I.B.A., county architect, 27 Binswood Avenue, Leamington.

CLECKHEATON.—December 28.—For the various works required in the erection of sub-stations at Webster Lane, Scholes, and Whitechapel Road, Cleckheaton, for the Spenborough Urban District Council (Electricity Department). Forward names by December 28 to Messrs. R. Castle & Son, architects, Midland Bank Chambers, Cleckheaton.

CLYDEBANK.—December 30.—For any of the following works in connection with erection of 22 houses at Whitecrook, for the Town Council, viz.:—Excavator and brick work, carpenter and joiner work, glazier, slater and roughcast, plumber and gasfitter, plaster. Deposit £1 ls. Messrs. Stewart & Paterson, architects, 16 Blythswood Square, Glasgow.

COLCHESTER.—January 1.—For erection of a block of six houses (non-parlour type) to be built at the Harwich Road housing site, for the Housing Committee. Mr. H. Collins, A.M.I.C.E., borough engineer, Town Hall, Colchester.

CWMBRAN.—January 2.—For erection of 10 houses on the Two Locks site, Cwmbran, for the Llantarnam Urban District Council. Deposit £2 2s. Mr. A. G. Jones, engineer and surveyor, Council Offices, Cwmbran.

DARLINGTON.—January 10.—For erection of 25 houses on the Cockerton Site, for the Corporation. The designs include pairs and blocks of three and four houses, and builders may tender for the whole or part of the blocks of the houses

to be erected. Mr. George Winter, borough surveyor, Town Hall, Darlington.

DIPTON.—December 30.—For the several works required in erection of shop, &c., in reinforced concrete at Flint Hill, Dipton, for the Annfield Plain Industrial Co-operative Society, Ltd. Architect's Office, The Grove, Lanchester.

GLOSSOP.—January 2.—For erection of 16 houses, in pairs and blocks of four, in Simmondley Lane, for the Town Council. Deposit £3 3s. Mr. H. C. Powell, A.R.I.B.A., 9, Albert Square, Manchester.

HEREFORD.—December 29.—For erection of 28 non-parlour type houses at Hereford, to be built in pairs, blocks of four, six, and eight respectively, for the Town Council. Mr. W. McNeil Shimmmin, A.M.I.C.E., city engineer and surveyor, Town Hall, Hereford.

LAMBHILL.—December 28.—The District Committee of the Lower Ward of the County of Lanark invites tenders for the excavator, mason, brick, &c.; carpenter, joiner and ironmongery; glazier, slater and roughcast; plumber and gasfitter; plaster and cement works of 48 dwelling-houses to be erected at Lambhill site. Deposit of £1 ls. for each schedule. Messrs. D. & D. Barclay, Architects, 440, Sauchiehall Street, Glasgow; or Mr. Jas. A. McCallum, district clerk, 15 West George Street, Glasgow.

LLAY.—For erection of a Primitive Methodist school chapel at Llay. Deposit £2 2s. The Housing and Town Planning Trust, Ltd., 1 New Square, Lincoln's Inn, London, W.C.2.

LONDON.—January 3.—For repairs to chimney stacks at the Eastern Fever Hospital, Homerton Grove, Homerton, E.9, for the Metropolitan Asylums Board. Deposit £1. Mr. T. Cooper, M.I.C.E., M.I.M.E., engineer-in-chief, the office of the Board, Embankment, E.C.4.

LONDON.—January 1.—For sundry small alterations and internal decorations at (1) the Union House, Queen's Road, Croydon; (2) "Waingates," 316, London Road, Thornton Heath, for the Guardians. Deposit £2 2s. Mr. H. Berney, architect, 33-35, High Street, Croydon.

MANSFIELD.—January 3.—For erection of 24 houses, type A, in the borough, for the Town Council. Mr. W. Thompson, A.M.I.C.E., borough engineer and surveyor, Market Street, Mansfield.

MASHAM.—December 30.—For construction of a small building of stone, with reinforced concrete roof, for a blowing chamber for new organ at St. Mary's Church, Masham, for the Organ Fund Committee. Messrs. T. & R. Theakston, Ltd., Masham.

PERRANPORTH.—December 30.—For erection and completion of a shop and residence. Mr. A. J. Cornelius, F.S.Arc., architect and surveyor, Truro.

ROCHDALE.—January 3.—For alterations and additions at Marland Hospital, for the Health Committee. The Borough Surveyor, Town Hall, Rochdale.

ROTHERHAM.—December 30 to January 20.—The Corporation will shortly be prepared to receive tenders for (1) erection of new stores and workshops at the Highways Depot, and (2) erection of new municipal offices in Howard Street. Quantities will be ready on the following approx. dates:—(1) December 30 and (2) January 20. Send application and £5 deposit for each contract to Mr. V. Turner, A.M.I.C.E., borough engineer, Town Hall, Rotherham.

SALTCOATS.—January 8.—For the following works required in the erection of 10 additional houses on the site adjoining Jacks Road for the Town Council, viz.:—(1) Mason and brick work, (2) carpenter and joiner work, (3) glazier work, (4) slater and roughcast work, (5) plumber and gasfitter work, (6) plaster work. Deposit £1. Mr. H. Thomson, architect, 60 Hamilton Street, Saltcoats.

SWANSEA.—December 28.—For erection of the following blocks of houses, for the Swansea Rural District Council:—(1) At Alexandra Road site, Gorseinon, 10 blocks each of two houses of the A type and 10 blocks each of two houses of the B type; (2) at Mount Street site, Gowerton, two blocks of two houses of A type and three blocks of two houses of B type. Alternative tenders for the erection of the whole of the houses on each site are also invited. Deposit, £2 2s. Mr. J. T. J. Williams, M.S.A., the Council's architect, 3, Temple Buildings, Goat Street, Swansea.

TALGAREG.—January 1.—For erection of proposed memorial hall at Talgareg. Mr. J. Evans, secretary, Post Office, Talgareg, Llandysul.

TYNEWYDD.—December 30.—For the building of a new dwelling house and adaptation of farm buildings at Tynewydd, near Whitland, for the Carmarthenshire County Council. Send applications by December 30 to Mr. W. Vincent Morgan, A.R.I.B.A., County Offices, Carmarthen.

WAKEFIELD.—For all or separate trades in connection with erection of 20 A2 type cottages on the Portobello estate, for the Town Council. Mr. P. Morris, architect, Town Hall Chambers, Wakefield.

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Bye-Laws and Building Acts.

The paper on "The Law of Building Outside London" delivered by Mr. A. N. C. Shelley at the R.I.B.A. on the 18th inst., was an interesting and careful *résumé* of a subject of which Mr. Shelley has had great experience.

We do not agree with those who hold that the ordinary bye-laws now in force in most rural and urban districts are unreasonable in the main or of a nature to cramp design. There are, of course, some points which might be amended, such as the requisition which renders it necessary to construct a watertight cesspool, a requirement which, as far as construction goes, is strictly complied with in districts where it is the almost invariable practice to knock a hole in the bottom directly the inspector has passed the work! Where cesspools are not too close together, and the nature of the soil and strata renders such a proceeding reasonable, the law has as much chance of being complied with as the Prohibition laws of America. Then, too, there is usually the unreasonable bye-law which enables us to make use only of a part of the roof space because the floor and ceiled spaces must bear a definite ratio to each other.

Of the usual sanitary bye-laws little need be said; they are reasonable enough in a country in which drainage work is always an item on which the most economical are willing to spend, and where many men would willingly expend £100 on drainage work and would grudge a £5 note for decoration. We do not grumble at the high standard set, but sometimes wish our ideals in other directions were equally exacting. All we would say is that we should like to have a little more latitude to conceal an occasional soil-pipe.

Mr. Shelley describes local authorities as being protectionist and architects as being "free-traders" in the matter of bye-laws, and we suppose this is a fair statement as to our general attitude. What architects want those who administer bye-laws and Building Acts generally is to be competent and highly trained professional men exercising wide discretionary powers.

No regulations can be described as being intrinsically good or otherwise, but are simply a means to effect an end; and if that end can be attained in a satisfactory manner, it does not matter to the community whether the method of doing it is or is not in accordance with a special formula.

We should like to see it made possible everywhere, in town or country alike, for any building scheme to be examined and reported on by a competent body free to accept or reject it on its merits apart from any question of building regulations. Such a body might be constituted and be open to anyone who chose to pay fees which would cover the services of its members; and, as far as we can see, nothing but good would come from the greater latitude obtained. But in the main those who wish to build in the country have little to complain of, and the problems arising are usually of a simple nature.

With regard to London we are, however, in a far less

fortunate position. The Building Acts form a library in themselves, and are often inconveniently stringent and unnecessary. We have seen and examined similar laws in force in cities like Paris and Antwerp, and when we find that all that is considered to be necessary can be comprised in documents occupying a small fraction of the space of the London Building Acts, we envy our Continental confrères. Even admitting the fact that building in London, on account of its size, must involve more complicated problems, and that the standard of hygiene set is, probably rightly, more exacting, there is still an utter disproportion between the contrasted legal requirements.

We put the case in this way: we may have two designs, one of which completely satisfies the requirements of the Building Acts, and is yet unsatisfactory, and the other which does not, and yet to which no reasonable exception could be taken.

We may, again, have two internal areas, one of which is too small to comply with the letter of the law, and the other which does comply, yet by skilful planning the first building may be better and more sanitary than the other.

The Building Acts may be administered by those who hold that they are a means to an end—that of safeguarding the health and well-being of the people—or, on the other hand, they may be logically considered as being as binding as the laws of the Medes and Persians, in which case they frequently become a web to hamper design.

We believe that no one who studies the subject can fail to reach the conclusion that what is required is not an amendment of the Building Acts, but their entire repeal and the provision of a shorter and more reasonable Act giving those who administer it very wide discretionary powers.

This is more than ever necessary now that the finance of building has become difficult since the war. The scrapping of all that is unnecessary in the Building Acts would enormously stimulate building activity all over the metropolis, and would form a factor in the prevention of unemployment. The profession owes a debt of gratitude to the District Surveyors, who have an unusually difficult and complex task to perform; but although in nearly all cases they help us when they can, they in turn are fettered by the complexity of the Building Acts and the limitations of their discretionary powers. Here in London we have the utmost need of a special body which could examine the schemes of those willing to pay the requisite fees on their merits and quite apart from the strict letter of the law.

As it is, we groan under what we may describe as a "Whitehall" system applied to building, for which we do not say any one body is directly responsible, but which is of no service to the community and frequently throttles development, and which, if not drastically reformed, may sooner or later bring London building operations to a standstill, and is among the greatest deterrents to business.

Our Illustrations.

NOS. 5 & 6 CROSBY SQUARE, ST. HELEN'S COURT, LONDON. Messrs. JOSEPH, Architects.



NOS. 5 & 6 CROSBY SQUARE, LONDON. ST HELEN'S COURT ELEVATION. Messrs. JOSEPH, Architects.

Nos. 5 & 6 Crosby Square, London.

The elevations are built in "Burmantofts' Marmo" terra-cotta supplied and fixed by the Leeds Fireclay Co., Ltd. The advantages of this artistic material, with its light matt surface, for narrow city courts and thoroughfares is very obvious, another excellent example of this being found in Cophall Court. Among other well-known buildings in London erected in the same material may be mentioned the Regent Palace Hotel and Messrs. Lyons's Strand Corner House.

Messrs. Parker, Winder and Achurch, Ltd., of Birmingham, supplied the bronze metal door and window furniture, including "New Togo" patent door springs.

The artistic wall tiling in the vestibule and corridors was manufactured by Messrs. Carter & Co., of Poole, Dorset.

Messrs. H. F. Wheeler, 39 Victoria Street, S.W., were responsible for the electric light fittings and wiring.

The marble work was executed by Messrs. Fenning & Co.

All the casements were supplied by Messrs. Crittall Manufacturing Co., of Braintree.

The art metal work was executed by Messrs. Singer & Co., of Frome.

Notes and Comments.**Mr. Murray's Scheme for Central London.**

We shall give an article on Mr. Murray's scheme for the development of Central London, a subject on which he is exceptionally able to discuss, since a large area of the affected districts is the property of the Department for which he acts. More than this, Mr. Murray has always shown his thorough insight into the practical and business considerations which are of the first importance and without full knowledge of which it is futile to attempt to lay down schemes. Meanwhile we may be certain that whether or not Mr. Murray's scheme will be endorsed by the profession of which he is a member, it will be found to be both feasible and workable in all its details, which will have received his full and careful attention.

The Building Guild.

The Manchester Building Guild appears to have entered into an arrangement which is tantamount to giving the

control over their business to Messrs. J. A. MacTaggart, of Glasgow, who are public works contractors. The terms are:—

The company shall, immediately upon the acceptance by the creditors of the Guild, lend to the Guild the sum of £50,000 to be used for the general purposes of the Guild, to be secured with interest at £6 per cent. per annum by a first debenture upon the whole of the Guild's assets (present and future, and including uncalled capital), all existing debentures of the Guild to be first paid off and discharged. The first debenture shall be repayable on six calendar months' notice on either side.

Such first debenture shall be subject only to (1) a legal mortgage on the Guild's offices in favour of the Co-operative Wholesale Society Bank; (2) an assignment of £7,660 retention moneys in favour of the Co-operative Wholesale Society Bank, and (3) an assignment (approximately £2,000) dated October 24, 1922, by the Guild to the Union Bank of Manchester, Ltd.

The agreement goes on to say that upon the payment of the £50,000 the Guild shall appoint Mr. John Auld MacTaggart and Mr. Jack Auld MacTaggart, directors of the company, or their nominees, to be the "sole and exclusive managers of the Guild for a term of three years, and thereafter subject to six calendar months' notice on either side, but with liberty for the managers to determine the managership at the expiration of the first two years by six calendar months' previous notice in writing. The managers shall have full and exclusive control of the Guild's business.

We had hoped that the Guild would have secured better terms than those stated, as these seem to us to mean that their business will in future be carried out on lines which closely approximates to those of an ordinary contractor's business. The London Branch of the Guild is not, however, included in the arrangement entered into, and so we may yet see the outcome of a most interesting experiment.

Housing.

We are told by the "Yorkshire Post" that the suggestion that housing should be encouraged by relieving it for a term of years from the burden of rating has few supporters,



NOS. 5 & 6 CROSBY SQUARE, LONDON. TYPICAL FLOOR LANDING. Messrs. JOSEPH, Architects.

as it is said that it would result in the unfair discrimination against similar housing now existing, and subject to rates. There is, of course, force in this argument, but might it not be met by relieving all housing built during the period of high prices following the war from the burden of rates? As we know this would affect a strictly limited number of schemes only and would make all the difference to the ratepayers' burden, we are inclined to think the arguments in favour of this solution are much stronger than any which can be advanced against it.

Egyptian Exploration.

The President of the Egypt Exploration Society writes to "The Times" as follows:—

In the course of my appeal for pecuniary assistance for the Egypt Exploration Society, which you were good enough to print in your columns of December 16, I ventured to deplore the lack of encouragement given to archaeological work in Egypt by his Majesty's Government, and pointed to the desirability of a permanent institute in Cairo which would perform for British Egyptology the same function as the British Schools at Athens and Rome perform for Greece and Italy respectively.

In advocating, once again, the establishment of such an institute, it was very far from my intention to minimise or to ignore the admirable society which has its centre at University College, London, and of which Professor Ernest Gardner is chairman, and Professor Flinders Petrie the director. Both these eminent scholars would doubtless agree with me that we should possess in Egypt itself an institute worthy of the British Empire such as France has long possessed. The Exploration Society, of which I have the honour to be president, desires nothing more earnestly than close co-operation and goodwill among all workers in the archaeological field.

We think it is to be regretted that such important work should be inadequately supported by this country, and hope that Lord Carnarvon's wonderful discoveries will result in further attention and support being extended to this most important branch of research.

Water Companies and their Methods.

Since the war facts have convinced us that water companies, and perhaps other public services, need the application of more control from the public department dealing with them—in this case, the Board of Trade. As it is well known, extensions of the public mains in many cases have to be paid for by private persons, yet these people get no rebate for their water rates to repay the extension of the water companies' main. They can refuse to supply water until their agreements are signed, and can and do refuse to consider any modification. Such agreements should, in cases of dispute, be subject to the arbitrations of the controlling department. And the owner of land on the edge of a water company's area should, we hold, be able to call on an adjoining company to lay on water if such a company's main is nearer. This would introduce the principle of effective occupation and stimulate a company to cater as it should for the convenience of the general public.

Architects' Fees for State-Aided Housing Schemes.

Architects interested in State-aided housing schemes have been notified in the Press that they should submit their cases to the R.I.B.A. Tribunal on or before December 31, 1922. Those who are unable at present to make an exact statement of the position regarding their particular scheme can apply on or before December 31 to the Secretary, R.I.B.A., who will give them the necessary information. They should furnish immediately as much information as possible regarding the schemes for which they are submitting claims for fees.

The carillon of forty-two bells which Mr. J. D. Rockefeller is presenting to the Park Avenue Baptist Church, New York, is to be manufactured by Messrs. Gillett & Johnston at their Croydon foundry. The bells will be played by means of a hand clavier fitted also with foot pedals. This method gives such complete control over the volume of sound that the most elaborate music can be played.

"The Architect" Fifty Years Ago.

DECEMBER 28, 1872.

A FEW WORDS ON THE YEAR 1872.

Mr. Street's design for the Law Courts is accepted on all hands as the latest and most characteristically emphasised demonstration in the direction of strong-minded nineteenth-thirteenth-century work. War has raged about it of course. It seems to be the inevitable fate of all architectural undertakings of any mark that are started on the basis of competition to become involved in bitter controversy, but the dispute in this case has been on broader ground than that of personal rivalry. Mr. Fergusson, the most influential critic we have, after a certain preliminary hesitation which is not inexcusable in such cases, courageously and almost fiercely took the initiative upon public principle, and this in language which no mere professional architect, however strong in his opinions, could well dare to use. Other assailants followed eagerly enough, and—what is strange—were not opposed by the well-known friends of the mediæval cause. It was perhaps remarkable, perhaps not, that scarcely any professional architect engaged in the controversy; but so observable was this that Mr. Fergusson charged it, in an unthinking moment, against the whole body of architects that they were actually supporting Mr. Street unconsciously for mere trades-union purposes. How far this was from the fact nobody thought it worth while to say; but probably no baited architect in the service of the public ever knew better than Mr. Street how little real support he was receiving from his apparently silent and friendly, but in private really outspoken and almost hypercritical brethren. At any rate, what with the want of tact and temper on the part of his chief assailants, and the utterly exhausted patience of the authorities, Mr. Street at length came to find himself, probably in some degree unexpectedly, victorious in a parliamentary division, and to all present appearance now permanently installed in the honourable seat of an accepted Government architect for the most important commission of the day. That he had all the time most firmly stood his ground, as Goth or nothing, was so highly creditable to that strength of character which alone could have placed him at the head of the advanced mediæval movement, that this was perhaps in no small measure the secret of his success; and, in the fitness of things, if the Courts of Law are to be a building of supreme artistic pretensions in that direction, the architect in charge of the work is unquestionably the one man who is entitled more than all others to conduct the demonstration to an issue. Thus far, then, Gothicism in 1872 has undoubtedly and signally triumphed.

Competition News.

The awards in the competition for the new "Tribune" Building, Chicago, have been announced. The winning design was the work of Mr. John Mead Howells, New York, and Mr. Raymond M. Hood, associate architect. Messrs. Hutton and Taylor, Glasgow, received honourable mention. Mr. Howells is the son of the late Mr. William Dean Howells, the well-known American novelist.

The Municipality of Colombo recently called for designs for a new Town Hall for the city, offering prizes for the best three selected. The results of the competition are now announced, the first prize of Rs. 5,000 being awarded to Mr. S. J. Edwards, of Singapore. The second prize of Rs. 3,500 has been won by Mr. W. H. Bourne, of Allahabad, and the third prize of Rs. 2,000 by Mr. Ram Rup Sharma, also of Allahabad. Twenty-six designs were received.

The number of designs entered by architects for the competition for labour-saving bungalows organised by "The Daily Mail" in connection with its Ideal Home Exhibition in March next totalled 768. This is more than double the number received in the previous most successful of the architects' competitions run by "The Daily Mail." The technical assessors, Mr. E. Guy Dawber, F.S.A., F.R.I.B.A., and Professor A. E. Richardson, F.R.I.B.A., have now made the following awards:—1st prize (£300), Mr. Jas. M. D. Henderson, A.R.I.B.A., M.S.A., 1 Holmston Road, Ayr, N.B.; 2nd prize (£125), Mr. C. Murray Hennell, F.S.I., in collaboration with Mr. C. H. James, A.R.I.B.A., 19 Russell Square, Bloomsbury, W.C.1; 3rd prize (£75), Mr. J. S. Hodges, A.R.I.B.A., 19 Craven Road, Harlesden, N.W.10.

The following were highly commended:—Messrs. Harold Williams, 123 Derington Road, Tooting, S.W.17; E. Frank Ferry, Lic.R.I.B.A., 134 Capel Road, Forest Gate, Essex; R. Collyer Clark, 40 Chaucer Road, Wanstead, Essex; J. B. F. Cowper, A.R.I.B.A., Olwyns, Wildwood Road, N.W.11; R. J. H. Minty, A.R.I.B.A., 35 Craven Street, Charing Cross, W.C.2; and Forbes and Tate, 97 Jermyn Street, S.W.1.

The following were commended:—Messrs. P. D. Hepworth, A.R.I.B.A., E.D.B.A., 7 Gray's Inn Place, W.C.1; B. de C. Jackson, A.R.I.B.A., 5 The Drive, Orpington, Kent; E. B. Musman, A.R.I.B.A., 5 St. John Street, Bedford Row, W.C.1; and V. F. Knowles, 116 Villiers Road, Oxhey, Herts.

A Great Renaissance Architect.

By Selwyn Brinton, M.A.

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"Biblioteca d' Arte Illustrata." L' Architettura dal XV al XVIII Secolo. Luciano Laurana. Con Testo e Catalogo a cura di A. Colasanti. Serie II. 1922. Roma V, Via San Basilio II-E.

One of the greatest figures in Italian architecture of the early Renaissance, and one who is even yet scarcely appreciated as he merits, is treated in this volume by Arduino Colasanti, who has lately succeeded Dr. Corrado Ricci in the important post of Director-General of Antiquities and Fine Arts in Italy. A word here, however, as to the general scope and subject-matter of this most interesting series of art publications, now being issued by the Biblioteca d' Arte of Rome, may be useful to my readers before I turn to my subject here in the marvellous architectural creations of the Dalmatian Luciano Laurana.

As long ago as 1908, when I published the last volume, under the title of "The Medici at Florence," of my Renaissance series, I ventured to predict that the cult of the "*quattro-cento*" (of which no one could be a more enthusiastic admirer than myself) had already run its course, and asked "What then will take its place—what be the new idol of art culture? . . . My own answer"—I went on to add, with the words "and I believe the future will justify this view"—"would be a sound appreciation of all that was good in all schools of art—in a word, an intelligent eclecticism. And one proof of the absurdity of the present position" (this was, of course, in 1908) "is in the fact that, while the buying public will run after Tiepolo, they neglect those men who were his precursors, and from whom he learned as much as from Veronese."

I contend that this prediction of fourteen years ago has been already justified, but most directly in the very last few years. Now not only the fresh and exquisite "*quattro-cento*," but the "*seicento*," even the work of the "*sette-cento*"—at which a devotee of John Ruskin would have looked askance—is a subject of enquiry and interest; and this not alone in painting, but as much, or even more, in architecture. It is to meet this public appreciation and awakening interest that the Biblioteca Illustrata have come forward. In a series of admirable little volumes, a few pages of generally most illuminating criticism, a most valuable bibliography and list of works, and some dozen—or often two dozen—well-chosen reproductions, they put any sincere student fairly on the road of discovery. And their point of view is really broad and catholic; not only—as may be seen above—do they take Italian architecture from the fifteenth to the eighteenth century, but they give a magnificent list, produced or to be produced, of painters, sculptors, architects and decorators of the "Seicento and Settecento Italiano," and not only this, but they give us the same centuries outside Italy, and show us El Greco, Jordaens, Jan Lys, and Zurbaran.

In these columns I hope to treat later, in connection with this series, the work of two daring spirits, two leaders of revolt in art and architecture, Michelangelo Merisi da Caravaggio and Francesco Borromini; but to-day I choose an entire contrast in the creation of one whose inspiration in architectural design was as harmonious as it was complete.

Luciano Laurana was certainly a Dalmatian by birth. He may have come from Lovrana, a little city on the coast of Istria, called in old time Laurana, and have gained thus his name, or from the castle of Urano, near Zara; or far more probably, as documentary evidence goes to show, from Zara itself. I have never—while wishing to do all justice to the claims for expansion of other races—concealed my sympathy with Italian aspiration for this beautiful coast, which was held for centuries in loyal sway by the Most Serene Republic of Venice, which was, and still is, filled with monuments of Italian genius, and from whence came some of the greatest figures in art of the Renaissance, most notably the man of whom we are now speaking, and that great contemporary sculptor, his

namesake, Francesco Laurana. Here, too, I would point out—a fact that even strengthens that claim—that the whole soil of this Dalmatian littoral is penetrated with the Latin tradition and historic monuments.

Where else, as Sig. Colasanti remarks, could Laurana have found the inspiration for that famous Arch of Alfonso of Aragon, which has been restored to him by the intuition of Bernich and the research of Lionello Venturi, and is here fully approved by the present Director of Fine Arts. Cav. Adolfo Venturi, in his admirable note on Laurana in "*La Dalmazia Monumentale*," takes precisely the same view. "The Roman Arch of Pola had inspired him to engraft this Arch of Alfonso of Aragon between the two mediæval towers which close it in, just as he set his loggia between the turrets of the Ducal Palace of Urbino." These towers and arch of Naples, raised between 1451 and 1455, precede, of course, by some twenty years that stupendous Palace of Urbino, Laurana's greatest creation, where he put into exquisite form the principles which he had imbibed from Brunelleschi and at Mantua from the great—I might even say no less great—originator of Renaissance architecture, Leon Battista Alberti. Luciano had most probably met this last-named architect at Mantua, where there is proof, from a document of Barbara of Brandenburg, that he had been employed, and that his immediate return was needed.

In that genial atmosphere of the Mantuan Court, steeped in Humanistic culture, he may have learnt much; the Gonzaghi were in close touch with the Montefeltri of



ARCH OF ALFONSO OF ARAGON, NAPLES.

Urbino, and it was in Urbino that Laurana was settled and buying a vineyard in 1470. In the Arch of Alfonso of Aragon, some twenty years earlier (he may have gone to Urbino in 1465), Venturi appears to consider that he was helped in the actual figures by Francesco Laurana—figures which are massive, heavy, like columns forming part of the strong arch, but well composed and often exquisite in detail, as may be judged from my illustration. The Roman Arch is here clearly in these two Dalmatians' thought, but emergent from the embattled towers; the new spirit of the antique emergent from the mediæval envelopment—just the idea which, as I have suggested, we shall see developed in that fairy Palace of Urbino. This was Luciano's greatest achievement, and to this I shall devote my whole space and attention in a succeeding notice. His work in Mantua is not established, and that at the Rocca of Pesaro, commenced by the Sforza in 1474, though we know that he was employed in this construction, is not of the same importance. In the Palace of Urbino alone he soars to the full flight of his genius, and sets his name and fame, an immortal triad, beside Brunelleschi and Alberti.

(To be continued.)

Modern Methods in Building Construction.—XXXIX.

By Albert Lakeman, M.S.A., M.C.I.

FLOOR CONSTRUCTION—(continued).

A good permanent floor finish is produced by the use of hardwood laid in narrow widths and fixed down to deal battens secured to the concrete base. This type of floor is suitable for public halls, offices, and similar buildings, while it is the ideal floor for factory purposes where the manufacturing process renders its use practical. It is comparatively expensive, and is therefore not always adopted where suitable on account of the initial outlay, but when properly laid with good material it will generally prove economical over a period of years as compared with many other types. For large halls and offices oak is frequently the material selected, while for factory use maple is the only wood that will satisfactorily withstand severe traffic and hard wear. Mixed hardwoods are occasionally used in factories, but these will not be found so lasting as an all-maple floor, and many portions will become destroyed under conditions which would leave little effect on the maple. The advantages of a hardwood floor over one finished with a granolithic or similar surface include:—(a) There is no dusting up of the material; (b) it is warmer to the feet; (c) the objection of the wearing away at the joints which occurs with a granolithic surface is eliminated; and (d) it is not so tiring to the feet.

The last-mentioned item is a very important one, as the output of the operatives will always be affected by the conditions under which they work, and the necessity for standing and walking on a cold surface that lacks any elasticity will materially influence the worker, particularly where female labour is employed, toward the end of the day.

In a well-known restaurant in London it was found that waiters using a concrete staircase for service from a kitchen on the floor below became very much more tired than those using a wooden staircase of the same length of flight and under identical conditions, owing to the fact that the wooden staircase was more elastic, and the substitution of wood for the concrete stairs resulted in a marked improvement in the restaurant service. This is quoted merely as an example of the influence of a material to cause fatigue, and this principle applies in a marked degree to floor surfaces.

Maple flooring should be laid with good quality selected material, and the thickness of the boards should not be less than $1\frac{1}{2}$ inches nominal, while the width on face should not exceed 4 inches. The edges and ends of the boards should be grooved and tongued, and where a high-class finish is required secret nailing should be adopted.

To prevent rot occurring and ensure a sound floor it should be constructed and laid in the following manner. The concrete base, 4 or 6 inches thick, is first laid down to receive the sleepers, or the surface can be prepared and the sleepers be placed in position and kept up the necessary distance to allow the concrete to pass under and around them, and whichever method is adopted it is essential that the sleepers be well bedded in the concrete to give a secure hold and the tops must be level to permit the maple to be laid direct without any easing or adjustment. The sleepers, which are splayed on one side to give a firm hold in the concrete, are of deal, and they must be well creosoted to prevent rot occurring. These sleepers may be spaced at from 14 to 18 inches centres, but 16 inches is a satisfactory spacing to employ. When they are laid on to a concrete base already in position they can be levelled up by the use of small tapering pieces of deal where necessary, but if these packings are adopted they should also be creosoted before use. It is a common practice to use small pieces of scrap asbestos tile or sheet for packing purposes, and this method is quite satisfactory. Where the concrete base has not previously been laid down it is necessary to pack up the sleepers at intervals with larger units, and bricks are generally employed, these being left in position and

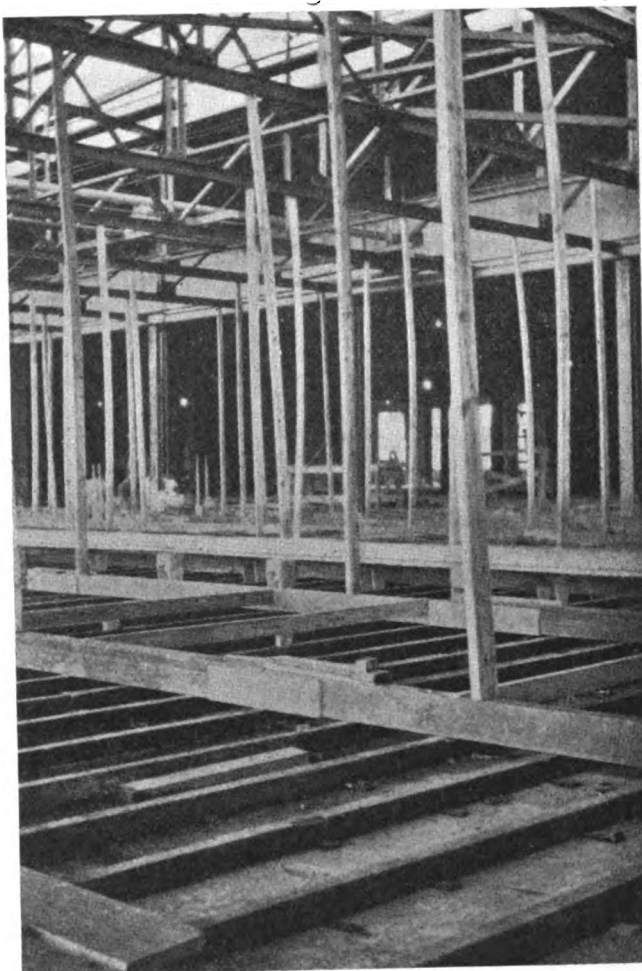


Fig. 184. METHOD OF LAYING SLEEPERS FOR FLOOR.

concreted in. Owing to the tendency of the sleepers to curl or lift up when the wet concrete is placed, it is necessary to arrange for some weight or pressure to be applied until the concrete is set. A very simple method is to lay down some lengths of steel joist or other suitable available section on the top of the sleepers and at right angles to same, or wooden plates struttled down from the overhead work or bolted to the concrete base—where this exists—can be used. Fig. 184 shows creosoted sleepers laid on concrete base ready for filling, with plates struttled down from the roof trusses overhead, and fig. 185 illustrates sleepers that are held down by plates bolted to the concrete base. The concrete between the sleepers is being filled in and screeded off by the workers, shown in fig. 185. In many schemes



Fig. 185. CONCRETING SLEEPERS FOR MAPLE FLOOR.

the concrete is screeded off level with the top of the sleepers, and no further preparation is made to ensure an even bed for the maple, but in the best class of work the concrete is finished with the spade only, just below the top of the sleepers, and a level surface is then prepared by laying a thin cement and sand screeding coat which can be worked to an accurate level. By this method the maple will obtain an even bearing on the sleepers and the filling, which will increase the lasting properties under heavy traffic. In cases where more spring is required, as in the case of a hall which may be used for dancing, the hardwood surfacing should bear on the sleepers only, and the concrete filling is then deliberately hollowed in between the sleepers to prevent the boards taking a bearing except on the latter. When the sleepers are laid and concreted in and the surface is screeded, the work must be allowed to stand until it has hardened and dried out as much as possible, and the period that must elapse for this will vary according to circumstances. When the work is sufficiently dry it is an excellent plan to give the whole surface a coat of creosote, applied with a large brush, as a preparation for the mastic layer in which the maple should be bedded.

This mastic layer is made with hard mastic and thinning oil, which are heated together until well mixed and capable



Fig. 186. MACHINE SHOP WITH MAPLE FLOOR.

of being spread with a stiff brush. It is laid hot in advance of the actual maple laying, and, if properly heated, mixed and applied, it will remain plastic for a long while, thus allowing the boards to be bedded down on to a plastic waterproof layer which will effectually prevent the surfacing material being affected by moisture that may cause rot at a future date. When laying the maple several boards should be put down at once and well cramped up before nailing, and fixing must be given at every sleeper. Any irregularities in the surface can be cleaned off when the work is complete, and, if necessary, the whole area can be treated with a sand-papery machine which is electrically driven. The finished surface will also be improved by giving a coat of linseed oil, which will fill any open grain and generally assist in the preservation of the wood.

The illustration in fig. 186 shows a large machine shop nearing completion, and the whole of the floor was laid with maple in accordance with the above described methods with satisfactory results. Wood block flooring is another type which is very suitable for many purposes, and its use on a small scale for several years in various classes of buildings has been followed, but it is comparatively expensive, and its application has therefore been limited. It must be laid on a concrete base, and this must either be screeded to give a level bed or a cushion of some material capable of easy adjustment to cover the irregularities must be used. In American practice a layer of clean fine sand, about $\frac{1}{2}$ inch thick, is frequently spread over the area of the concrete to give a suitable bed, and the joints between the rows of blocks are stripped during laying to ensure a uniform joint. After the blocks are in position these joints

are filled with a hot liquid bitumastic material which binds the whole together.

It is preferable, however, to screed the concrete base and bed the blocks in the liquid mastic while laying, and when a section is in position the joints are filled with a cement grout, which is poured on and well brushed over the whole surface. It is important thoroughly to fill the joints to prevent the blocks working loose, and when creosoted deal blocks are used—as these are laid with the end grain exposed to give the maximum wearing property—there will be a tendency for considerable shrinkage across the grain, which reduces the size of the block on plan and causes it to become detached from its neighbours. The shrinkage and consequent working loose of the blocks is the principal defect that occurs with the use of this method when adopted for internal work, and has undoubtedly been a great factor in limiting its application in modern buildings.

If an ordinary deal boarded finish is required, this can be obtained by laying down in a similar manner to that described for maple, but, owing to the great tendency for decay to set up, it is essential to creosote the underside of the boards or apply some suitable preservative before laying. It will obviously not be suitable for very hard wear or traffic, but will answer quite well for office purposes or domestic buildings, and in the latter case it is sometimes nailed direct to cinder concrete without the use of sleepers. With regard to tiles, marble and similar floor coverings, very little development has taken place in modern work, and no special notes in connection with these are necessary.

Some attempts have been made in recent years to develop the use of bituminous material as a floor surfacing material, and it has certain advantages which make it desirable for some purposes. It can be laid as a complete covering without any joints in the finished work, which is a distinct advantage, and it is waterproof, does not crack, and is easily repaired if worn or damaged at any point. Among the disadvantages the principal one is that it becomes soft under heat, and it will not withstand pressure concentrated on a small area without a depression being caused which sometimes extends through the full thickness of the material.

The suppliers of this type of flooring will undertake to give a fairly hard material which will not soften under ordinary conditions, but there is a limit to the degree of hardness, and, generally speaking, the increase in hardness is only obtained by increasing the difficulty of laying, due to the material being very stiff, and this naturally decreases the output of the floor layer, and so increases the cost per yard super. The author's experience of this material has been that it will not withstand heavy traffic or loading during warm weather, or where the building is kept at a fairly high temperature to suit particular conditions, and when used for factory purposes its application must be restricted to those positions where heavy concentrated loads will not occur, and where naphtha and similar spirits will not come in contact with it. It requires to be laid on a concrete base, and if this is not finished with a screeding coat or brought to a very accurate level, great difficulty will be experienced in obtaining a level surface in the finished work. When compared with granolithic, however, it is more comfortable to the feet, and in addition does not dust up or crack and become separated from the concrete base, and it is ready for usage in a very short while after laying.

With regard to patent composition floors, these developed rapidly during the years just prior to the war, and at one time there were indications that they would become general practice for the majority of buildings where a jointless surface finish to a concrete base was required; but their use has diminished rapidly in modern work, despite considerable effort on the part of the inventors to improve the quality and keep the cost down to a competitive level. Many of the jointless floors are composed to a large extent of sawdust, and appear excellent in many respects when newly laid down, but experience generally has shown that they will not withstand even reasonable usage, and under

severe conditions they quickly become disintegrated and break up from the concrete base. Several different types, more or less of a similar nature, were put on the market, but the claims put forward were apparently not justified, and they are now viewed with suspicion by architects who have had any experience in their use. The preparation of the concrete surface usually involved the application of a dilute acid, and this frequently caused trouble to pipes and other metal work that came in contact, and the author personally had to deal with one instance where serious damage resulted from this cause, and during the past few years has had occasion entirely to strip up surfaces of unsatisfactory jointless flooring and relay with more suitable material. The advantages claimed for this type included that of being able to give a pleasing coloured surface of any reasonable tint, which had a finished appearance, and did not require to be covered with linoleum or other similar material when used for offices, domestic buildings, or other like structures, and this was naturally a considerable inducement to a building owner when the choice of floor surface was under discussion.

The material is also not so cold and harsh to the feet as granolithic, and, while not so pleasant as a hardwood floor, it is considerably less expensive in first cost. These advantages form a strong recommendation for the use of the material, but when counteracted by the disadvantage that the floor surface will only have a very short life, and entire renewals must be made at comparatively frequent periods, it will be clear that initial low cost and good appearance are only obtained by a sacrifice of the most essential quality—*viz.*, durability.

Concrete and granolithic floor surfaces are frequently treated with special materials or liquids to increase the resistance to wear and reduce the liability to dust up, the latter being particularly important in some buildings; but as several of these materials were mentioned when dealing with the subject of waterproofing, they will not be further described here.

The various factors which will determine the selection of a floor surface finish may be given as appearance, suitability, initial cost, speed of execution, and durability, and some or all of these factors must be considered by the architect before a decision is reached as to the method to be adopted. The appearance may be of importance as in the case of the large public room of a modern hotel, or it may be a secondary consideration as in the case of a factory building, and this factor will be governed to some extent and is allied to the question of suitability. The question of suitability will always be of great importance, because a floor which is cheap, durable, and speedily executed should not be selected because of these advantages if it is unsuitable for the purpose for which the floor is laid. As an example, a granolithic floor will never be suitable for a dance hall, although it is cheaper than a hardwood floor, neither will a Sicilian marble floor be suitable for an office, in spite of the fact that the architect may consider the appearance is good, and a bitumastic floor would hardly be applicable to a high-class restaurant. There are limits, therefore, in the selection of the material, and in dealing with any particular building or portion of a building the question of suitability must first be settled, and only those materials which satisfy this condition should be considered when the items of cost, speed, and durability are taken up.

In dealing with initial cost the factor of durability must not be overlooked, and these two items should bear some relation to one another. It will obviously not be economical to select a floor having an extremely low initial cost if this involves a very high maintenance cost when the work is complete, owing to lack of durability, and therefore initial cost must not be considered alone. Provided the conditions of appearance, suitability, speed of execution, and durability are satisfied, then obviously the material having the lowest initial cost should be selected.

The actual cost of any type of flooring will be dependent on the quantity dealt with and the circumstances of each individual case, and it is therefore difficult to give reliable figures. The author's experience has been that the cheapest

floor as regards initial cost is that formed with concrete, finished with the floated face (as previously described); while the most expensive is a marble finish on a concrete foundation. The following table shows the ratios of initial cost for different types where the cost of the float-finished concrete is taken as the unit cost, the comparisons being based on the outlay required for the foundation and the finishing surface.

| Type of Flooring. | Cost. |
|---|-------|
| 1. Concrete, 6 inches thick, finished floated face .. | 1'00 |
| 2. Artificial stone slabs, 2 inches thick, on 6-inch bed of ashes | 1'20 |
| 3. 1 inch granolithic on 6-inch concrete base | 1'36 |
| 4. 1½ inches granolithic on 6-inch concrete base .. | 1'54 |
| 5. Patent composition jointless flooring on 6-inch concrete base | 1'54 |
| 6. 2-inch deal wood blocks laid in mastic on 6-inch concrete base | 1'80 |
| 7. 1½-inch deal flooring, creosoted on underside with creosoted deal fillets and concrete base .. | 1'84 |
| 8. 2-inch artificial stone slabs on 6-inch concrete base .. | 1'84 |
| 9. 3-inch deal blocks laid in mastic on 6-inch concrete bed | 2'13 |
| 10. Bitumastic flooring, 1 inch thick, on 6-inch concrete bed | 2'16 |
| 11. 1½-inch T & G maple flooring, with creosoted deal fillets and concrete foundation | 2'28 |
| 12. Sicilian marble, 1 inch thick, on 6-inch concrete base .. | 4'62 |
| 13. Pentelikon marble, 1 inch thick, on 6-inch concrete base | 5'52 |

These figures are given as a comparative general guide only, and it will be a simple matter to produce isolated examples where the comparison is not maintained, but average costs and conditions must be considered. It will be seen that maple flooring will cost more than twice as much as a float-finished concrete floor, while the use of granolithic—1 inch thick only—requires an expenditure of over 30 per cent. more than the finished concrete surface advocated by the author.

With regard to speed of execution, this will generally be of some importance, and the minimum number of operations involved will usually result in quick work. For this reason the float-finish concrete will prove the most expeditious type, while a type requiring a concrete base, creosoted sleepers, screeding and boarding will generally take the longest time to execute. The last factor to be dealt with on the list given is durability, and the value of this, in permanent work, cannot obviously be overrated. The durability will be affected by the conditions of usage, and some types which are quite durable under light traffic will quickly become disintegrated under severe conditions. The most durable types under heavy traffic will be maple and good deal blocks, and the least durable will probably include deal boarding, artificial stone slabs on ashes, and patent composition jointless flooring. There is a wide scope in floor construction and finishing surfaces, and it is a phase of modern building work which must be carefully studied by architects if the best results are to be obtained at a reasonable outlay, consistent with the class of building under consideration.

(To be continued.)

PART II.—XI. Foundation Work (Ordinary soils, Soft soils), April 7; XII. Foundation Work (Soft soils), April 17; XIII. Foundation Work (Soft soils), April 21; XIV. Foundation Work (Soft soils), April 28; XV. Foundation Work (Soft soils), sheet piling, May 5; XVI. Foundation Work (Soft soils), steel-sheet piling, May 12; XVII. Foundation Work (soft soils), steel-sheet piling, pumping, May 19; XVIII. Foundation Work (Soft soils), pumping, May 26; XIX. Foundation Work (soft soils), foundation piles, June 2; XX. Foundation Work (soft soils), foundation piles (cont.), June 9; XXI. Foundation Work (soft soils), foundation piles (cont.), June 16; XXII. Foundation Work (soft soils), Waterproofing, June 23; XXIII. Foundation Work (soft soils), Waterproofing (cont.), June 30; XXIV. Waterproofing (cont.), July 7; XXV. Water Supply, July 14; XXVI. Concreting, July 28; XXVII. Concreting (cont.), August 4; XXVIII. Concreting (cont.), August 11; XXIX. Concreting (cont.), Aug. 18; XXX. Concreting (cont.), Aug. 25; XXXI. Form Work, Sept. 1; XXXII. Form Work (cont.) Sept. 8; XXXIII. Brickwork, Sept. 22; XXXIV. Superstructure Frame, Sept. 29; XXXV. Superstructure Frame (cont.) Oct. 6; XXXVI. Steelwork Erection (cont.), Oct. 13; XXXVII. Floor Construction, Oct. 20; XXXVIII. Floor Construction (cont.), Dec. 8.

The University in Relation to the Planning of the City.

At a meeting of the Town Planning Institute held on the 8th inst., at the Institution of Civil Engineers, a lantern lecture with the above title was given by Professor P. Abercrombie, M.A. It had been announced that Professor Abercrombie would read a paper on "The Site for London University." But the actual lecture, as will be seen from the report that follows herewith, dealt with the subject only incidentally.

On the superficial analogy of the Post Office or the Public Library, with its branches duly distributed and its central office at the administrative heart, it might be thought that if the University is to occupy its logical position at the apex of the educational ladder, it should be found invariably at the cultural focus of the city. Unfortunately things are not so simple; the university itself is by no means always the same type of institution, and within it are two factors continually attracting in opposite directions—the intellectual, drawing it inwards towards central institutions, libraries, hospitals, museums, and even business life; and the residential, drawing it outwards into the country for ample playing fields, fresh air, and quiet. In many cases, again, historic associations and sentiment are sufficient to outweigh mere practical reasonings. The attitude of the thoughtful town planner is, on the one hand, not to allow that a university is right in growing up wherever it happens to find itself, either scattered or huddled, and on the other that very much more is involved besides planning grandiose groups of buildings, exercises in theatrical composition, on any vacant site that appears to offer itself for a display of architectural virtuosity.

Towns in which universities are to be found may be grouped into three—namely, the capital city, the commercial borough, and the university town proper. The university in each of these types generally possesses a special character in itself and in its relation to the town.

Paris is at once the clearest case of the capital university. The city was formerly divided into three zones or quarters—La Cité, the island in the Seine, which was the real capital of France; La Ville, the commercial borough with its Hôtel de Ville, on the north bank; and L'Université, the whole area enclosed within the walls of Philippe Auguste on the south bank. This was the ideal arrangement, the quarter of learning, le Quartier Latin, self-contained, a world in itself, with its own valuations and standards. Only in the last century has it spread out beyond the limits of the old walls. But the claims for open-air exercise somewhat more violent than can be obtained in the Luxembourg Gardens have in recent years given strength to the pull of the country magnet. In the great Paris Competition of 1920, two of the competitors projected a Cité Universitaire, both choosing, oddly enough, the same spot, the old Parc de Sceaux, due south of Montrouge. M. Jaussely (who was the winner in the general competition) boldly proposed to transfer the whole teaching apparatus of the University of Paris to the spot, leaving the Sorbonne as the Grand Palais des Réunions académiques. The second scheme was for a purely residential university city adjoining and almost forming part of a very large suburban development, so there was no suggestion of an isolated community of academic recluses.

The chief building of the University of Berlin is much more in evidence than the Sorbonne; it is patently at the centre of things. One of the colossal group of somewhat loosely thrown together buildings at the head of the Unter den Linden, its association with the Palace, Cathedral, Museum, Art Gallery, Arsenal, Opera House, etc., may appear fortuitous; but in reality it takes its place as one of the official buildings of the empire, and next to it is the Library.

At Vienna the headquarters of the University were removed from the graceful Baroque building in the old town to the huge block in the Ring; near by, in the neighbourhood of the Wahringerstrasse, are the dependent institutes, creating a Quartier; farther round the Ring, opposite the Palace, are the two Museums. So here is an example of a change of situation comparatively recent (1870) in which, a superb and still central site being available, a move of a few hundred yards was made from the cramped inner city to the Ring with its parks and light.

Edinburgh closely follows the Continental practice; a single large building designed by Robert Adam in 1778 (but modified in execution) originally housed the University. It has now burst these limits, and there are the McEwan Hall for graduation ceremonies, the medical school and other institutions grouped close together; next door to the original building is the Scottish Museum. Though pent up in the narrow streets of the old town, these buildings are close to the open.

Trinity College, Dublin, introduces two entirely new elements into the university situated in the capital city. Firstly, it is

partly residential; and, secondly, it possesses what is called elsewhere a Campus—in other words, though centrally placed, it has ample space and almost the seclusion of a country situation. An enclosed block of 28 acres in the heart of a city is delightful for the University, but may prove inconvenient for the city itself, though its right situation (as in Dublin) in the cultural zone, or Quartier Latin, will minimise this.

While Edinburgh and Dublin, both founded about the same time (1580–1590), were building up their great Universities, employing in the eighteenth century the first architects of the day, Robert Adam and Chambers, to clothe the growing organism in worthy form, London, by a too easy reliance on the vicarious offices of Oxford and Cambridge, remained, the greatest of capitals, without a university. It was not really so much the gross materialism of our metropolis—the quality noted by Erasmus—as a rational pride in the sequestered ease and semi-clerical calm of our twin seats of learning; combined perhaps with a feeling that due academic concentration was not possible in the hurly-burly of London. But it was a mistake, for which London is paying now. If she had set about it as Dublin did in 1591, when the Corporation handed over to the new University the sequestered monastery that Henry VIII. had given them, what might not London University have possessed to-day? There would not have been any question about where was the University quarter.

The problem of London is more complicated than that of any other city with a university in it. There is, firstly, the fact that it contains in its organisation a feature which to many is the negation of a university function: it is in part an examining body which does not teach. But its teaching also is on a colossal scale: three full colleges, of which two, University and King's, are each as big as the larger provincial universities, and a mass of smaller institutions, of which the medical schools attached to the hospitals form perhaps the most homogeneous block. Among many schemes to draw closer together the scattered fragments of the largest university in the world, four are outstanding. (1) The concentration of as many as can well be moved on to a site in Bloomsbury, contiguous to University College, and the creation, after the model of Paris, of an academic quarter, of which the intellectual (though not actually the physical) focus is the British Museum. The two biggest removals for this purpose are the administrative headquarters from the Imperial Institute and King's College from Somerset House (both removals likely to take place anyhow), and for this purpose the Government has given 11½ acres. New institutions would in future always be added to this group where possible. (2) The development of a new site at Lambeth, presumably for the administrative headquarters and King's College; the latter would give the south bank a teaching institution to balance University College on the north. The headquarters would in this scheme be brought into the centre of the Empire, after the model of Berlin. (3) The removal to the delightful site of Kenwood, close to Hampstead Heath, but whether for teaching, administrative, or only residential purposes is not certain; if the whole were to be transferred there, the New York removal would furnish a model, though on a much smaller scale. (4) Less remote, Holland Park has been suggested as a site large enough to allow a spacious lay-out almost on the lines of an American Campus, utilising the extremely beautiful old Holland House. The first of these four is the official scheme, to which the others are suggestive alternatives.

New York, like London, possesses two colleges or bifurcated universities, but, unlike our University and King's Colleges, Columbia and New York Universities have not been supplied with a connecting thorax and head. They remain independent. Columbia, eighty years the older of the two, is already occupying its third position, for which a scheme of spectacular magnificence has been adopted, though on a site necessarily limited in extent and dominated by McKim's famous library. New York University was first housed in 1833 on the east side of Washington Square, in a building recalling one of our older English colleges. The new situation at University Heights, farther out than Columbia, is extremely picturesque. Again there is a great library building, enclosed at one end by the Hall of Fame. The district surrounding the University is developing as an academic quarter; so here is a definite example of the removal from the centre of a capital to the suburbs.

Liverpool is an excellent example of the humble educational beginnings of a commercial borough, quickly transformed into a vital university, suffering perhaps in the extreme from an unavoidable lack of town-planning foresight. Only a few hundred yards away the unpleasant character of the neighbourhood changes completely, access is pleasant and well supplied with trams, and the dignity of old Georgian houses and squares is found. Depressed by its present situation, the recent growth has striven upward towards this pleasanter district, and

already has practically absorbed one square, whose old houses combined form departments in which health, amenities, and convenience are obtainable. In this direction a University quarter may be built up.

Manchester has come off better than Liverpool; the University site is somewhat farther from the centre (over one mile from the Town Hall), but still not suburban, it is approached by a direct straight street, a main tram route, Oxford Road (whose name, however, is more fitting than its character); the buildings, more fortunate in material than Liverpool's, do also group themselves into a quadrangle of some dignity.

The position at Birmingham is interesting and more complex. It started with Mason College, at the actual centre point of the city, a civic centre extremely condensed and indeed mixed. A site of rather more than an acre being insufficient, 40 acres were given amid beautiful suburban surroundings at Edgbaston, and a great plan of building on original and organic lines adopted. But the whole University did not move out: so far city ties have proved too strong not only for the Faculty of Medicine, but that of Arts as well. Here is a complete example of dualism—the Principal is in the centre, the Registrar in the suburb, the students in equal numbers at each place.

The University of Sheffield is fortunate in situation both in relation to the town and actual site. Three-quarters of a mile from the Town Hall, it is placed in a small clean park, which also contains the Art Gallery and may some day contain the Central Library and general Museum.

Almost a miracle amongst the cities of these islands, Cardiff has been able to create quite recently a civic centre large enough to accommodate administrative and cultural elements. The site is spacious, beautiful and central. In addition to the new University building there is the National Museum and the Technical School. The balance at the moment is about equal: Town Hall, Law Courts and County Hall, administrative—University, Technical School and National Museum, educational.

Dr. Johnson was of opinion that a university should be situated in a town which was predominately given up to that purpose; that is to say, according to the Geddes classification, as nearly as possible a purely Tertiary community. Of this type of university city proper we have produced the two finest examples in the world. And yet neither Oxford nor Cambridge is quite pure in its academic type; both possess marked secondary characteristics as county towns and important agricultural market centres. We must go to America for a purely university town. Cornell itself is really not a town at all, but a large university group on a plateau of 1,400 acres, with a small dormitory town below, which has absorbed the village of Ithaca. Nevertheless Oxford and Cambridge stand for the pre-eminent university towns, owing to their antiquity, the number of colleges, and the way in which the whole town is interpenetrated by them. At the same time the colleges, owing to the English quadrangular tradition, for the most part turn a blank or almost blank wall to the town.

The Sorbonne is the greatest example of the Continental concentration of a university into one building. The gigantic block was practically rebuilt at the end of last century by Nenot. Efficiency of administration is the keynote, complete absence of natural greenery the result; the streets and internal courts provide the light and air.

The English quadrangle is an inheritance from the monastery. The effects aimed at may be described as internal to the college rather than external to the town. The typical front had originally a fortified aspect, with a gateway as its chief feature, found in its grandest at St. John's, Cambridge. In its method of growth much may be said in favour of the quadrangle, proceeding by means of enclosed units which can be added *ad libitum* without the new endangering the old. There is, of course, a limit to the grandiosity of effect to be obtained by a succession of quadrangles; but William Burges made a magnificent design of four consecutive quads for Trinity College, Hartford (Connecticut), which, unfortunately, has not been completed, and has been roughly handled as far as it has gone.

The openness of the Campus is as natural to America, a new country, as the enclosed quadrangle to this old country—the prairie against the monastery. Wilkins did at Downing College, Cambridge (a scheme that should be better known than it is), attempt an English Campus; but generally with us the park-like garden and trees are to one side of the college buildings, in contrast with the formally enclosed quad with its elipt grass. In the Campus method the departments of the university are scattered about a park, and are actually among the trees. At first this might suggest a lack of unity, but of course that depends upon the type of park, whether picturesque or formal. In some of the older universities, after a first roughly grouped square, as at Yale and Harvard, the other and later buildings

have almost been allowed to squat anywhere. Princeton looks as though they were built in the open glades of a wood. But more recently the Campus idea has been also assumed to contain the notion of academic unity of design. An early example of this now typical American university conception is Virginia, where a rotunda forming the Library is the climax of the composition—a logical position which has become almost the recognised arrangement. The Library, not the Senate House or Great Hall, is thus the dominating symbol of the University; learning rather than academic control or the hall-mark of degrees. It would have been pleasant if the Radcliffe Camera at Oxford, which is manifestly the centre point of the picture-medley of her colleges, could have been pointed to as the prototype of the Library apotheosis.

The effect of the Campus, surrounded by separate buildings (which may be linked together), is grandiose and unified—the university seen at a glance. As in all unified conceptions, in the Campus and group plan as modernly conceived, it is difficult to provide for future growth, though one method—in which each unit has its possible extension—would seem sufficient. But what appears colossal to-day is cramped to-morrow.

The degree of residentiability of a university is a changing factor. It is possible to build dormitory blocks close to the teaching blocks of college buildings, as is happening at many American colleges, in place of the self-formed Fraternities which have sprung up, so turning a teaching into a residential university. And there does seem a strong reason for combining these hostels, as has been suggested at Paris, into an academic residential quarter, near the university, if site and other things are favourable, or near the playing fields, if these are placed apart. The difference between such a new university with its ancillary dormitories and Oxford would be that in the former case the teaching buildings bulk the largest; in the latter the purely University buildings are few, the greater part of Oxford being residential colleges in which a certain amount of teaching is done.

Birmingham Architectural Association.

At a meeting of the Birmingham Architectural Association, held on Friday, December 15, Mr. C. Grant Robertson, M.A., C.V.O., Principal of the Birmingham University, gave a lecture entitled "Provincial Universities and the Study of Architecture."

The lecturer said that the seven provincial universities each had their own provincial area and that no university encroached its influence into the area of another. Thus Birmingham would not specialise in textiles, but rather in such branches as mining and electrical engineering, as these were amongst the most important occupations of the Midland Counties.

The influence of one faculty in a university on another was very beneficial, for by mutual criticism a general raising of standard was effected.

Mr. Grant Robertson remarked that he would welcome a department of Architecture in the University of Birmingham. It would improve the architecture in the city, and the criticism of the other faculties would bring about a greater appreciation of the fine arts by the general public. Such a department would have to start in a small way, and be built up as experience and application dictated.

Members of the profession would have to be consulted, and arrangements made which would enable the students to spend part of their time in offices, for there were parts of an architect's education which could only be learnt by practical experience.

One fact which was not always realised was that an architect, like any other professional man, must have a good general education before commencing to study for his profession; and unless students could satisfy the authorities that they had a sufficient groundwork they should not be admitted to the University.

At the conclusion of the lecture, Mr. E. P. Reynolds [F.] proposed a vote of thanks to the lecturer, which was seconded by Mr. B. J. Fletcher and carried with acclamation.

At the last meeting of the Morpeth Rural Council plans were submitted by the Ashington Coal Co. for 146 houses to be erected at Lynemouth, made up as follows: 21 five-roomed houses; 15 four-roomed houses; 82 three-roomed houses; and 16 six-roomed houses. All these dwellings have a scullery and a bathroom with a hot and cold water system.

The Ministry of Health has approved the principle of the Bournemouth Corporation scheme for a pavilion, the total cost of which will be over £150,000. The new pavilion will stand on the site of the Belle Vue Hotel, which is already the property of the corporation. The building itself is expected to cost £100,000, and an open competition for plans has been decided upon.

Correspondence.

Additions and Corrections to the Articles on British Sculptors.

To the Editor of THE ARCHITECT.

SIR,—I should like to take this opportunity of making a few notes on the series of articles published by you in 1921-2 under the title of "Studies of the British Sculptors from Pierce to Chantrey."

III. EDWARD PIERCE.—This sculptor must have been a collector also, as in the "London Gazette" for January 30-February 3 1695 we find the following entry: "On Tuesday the 4th inst. will be Sold by Auction at 4 afternoon, Mr. Peirce, Carver, and Mr. Manby, Painter, their curious Collection of Books, Drawings, Busts, Models, and Plaster Figures, at Mr. John Corles, the Golden Triangle, in Long-Acre, and continue daily till sold." His statue of Walworth is mentioned in the Prime Warden's Accounts for 1682-4 and 1684-6. Pierce's father lived in Bishopsgate Street, and various quotations relating to his activities are given by Vertue, as well as some high praise of his powers. I was wrong in stating that Vertue does not mention the Evans bust and statues of Gresham and Edward III in the Royal Exchange; the passage will be found in Add. MSS. 23,069, p. 20.

IV. CIBBER's fountain in Soho Square is now in private grounds at Weldstone, Essex. To the list of works by him should be added the magnificent monument to Heneage Finch, Earl of Nottingham, at Ravenstone, Bucks.

V. GRINLING GIBBONS.—The original agreement for the statue of James II, now at the Admiralty, is given by Vertue (Add. MSS. 23,072, p. 42). It cost £300, and that of Charles II at Chelsea Hospital £500 (Add. MSS. 23,069, p. 96).

A very interesting account of Gibbons' early life is given by Vertue in 23,069, p. 31b, from which it appears that the actor Betterton was his first employer and recommended him to the King. This account is perfectly consistent with Evelyn's independent discovery of him at Deptford, where, Vertue says, he lived with his family.

VI. JOHN BUSHNELL.—His father was a plumber—a member, presumably, of the Plumbers' Company—who apprenticed him to Burman, whose disgraceful conduct towards him caused the young man to abstract £15 entrusted to him for his expenses in putting up a monument in the country, and with this in his pocket to go off to Italy, where he spent nine or ten years. On his return Charles II received him with flattering attention and commissioned two statues in stucco, but, not meeting with the same attention from the courtiers, he took offence and quarrelled with various patrons. He got £150 each for the four statues on Temple Bar, but died very poor. Other works by him are the Charles II and Sir John Cutler in the Guildhall, formerly in Wren's building for the Royal College of Physicians; the monument to Sir Andrew Riccard in St. Olave's, Hart Street; that to James Noel at Exton, Rutland; and a lost monument to Thomas Brodrick and his wife in Wandsworth Church, known only by a water-colour drawing in the Guildhall Lysons.

VII. Bird executed no fewer than thirteen monuments in Westminster Abbey, not seven, as stated by me, besides numerous other works. He employed Scheemaker when he first came to England, handing him over the carving of the pediment of St. Paul's at the starvation wage of 15s. a week. (The Farington Diary, "Morning Post," August 25 1922). It may have been the memory of this that led Scheemaker to comment so severely on Bird's monument to John Holles, Duke of Newcastle, and made Vertue call the younger sculptor "a little animal" and say that he "soon show'd his airs" to his employer Bird. (Add. MSS. 23,069, p. 20b, 21a.) There is a good monument by him to Wren's daughter Jane in the crypt of St. Paul's.

VIII-IX. SCHEEMAKER.—This sculptor's service with Bird has been already mentioned; not so his employment by the sculptor Plumiére and Lord Burlington, his early work with Cheere in the monument to Robert Duke of Ancaster (ob. 1723) at Edenham, Lines., or his partnership with Delvaux, with whom he executed a number of works, the evidence for this partnership being the fact that Vertue possessed a catalogue of a joint sale of their works in 1740. To give a complete list of the works by Scheemaker which have come to the writer's notice since the chapters on him appeared would be to write another article; it must suffice to say that their number is only exceeded by their interest and to point out that among his pupils was young William Hoare, the sculptor, not the R.A. of the same name, whose works at Stourhead, Bath and Worcester deserve serious attention.

X-XI. RYSBRACK.—What has been said of Scheemaker applies with even greater force to Rysbrack, whose work, of which I gave nearly 300 examples, has proved to be far more extensive than appeared at all probable. It is worth noticing that the

busts made for the Queen's Grotto at Richmond are at Windsor Castle, which also possesses his magnificent portrait busts of George II and one of Queen Caroline; that a replica of the latter exists at Hertford House; that in two cases, those of the large allegorical monument at Kedleston and that of Admiral Boscawen at St. Michael's, Penkevil, Rysbrack worked after the designs of Adam, whose drawings are in the Soane Museum; that his busts of the Old and Young Milton are at Stourhead; that his bust of Charles I proves to be a fiction of Dallawz's; and that he is recorded to have worked far more upon the monuments signed by him than was usually the case with a sculptor of his eminence. His finest single figure is the statue of the Proud Duke of Somerset at Cambridge, which also owns the poorest of his official statues, that of George I in the University Library. His monument to Dean Drelincourt at Armagh, pointed out to me by Mr. Strickland, proves how widely his fame had extended. No. 47 in my list is incorrectly ascribed to Rysbrack, and was rightly given among the works of Scheemaker.

XII-XIV. ROUBILIAC.—These chapters are only a tentative essay towards the life and works of this great sculptor, and the mass of fresh material, both portrait and monumental, cannot be even remotely indicated. The three omitted busts at Windsor Castle alone, those of George II, Handel and Lord Ligonier, would alone make his name famous. Here it must suffice to note three errors which require apology. The bust of Wilton is no longer at Burlington House; the busts at South Kensington represent the Somersetshire Salmons, not the historian of Hertfordshire and his wife; and the George III at the Royal Exchange, Dublin, ascribed to Roubiliac by certain guide books, is by the younger Van Nost.

XV. WILTON.—Mr. Strickland informs me that Lady Anne Dawson's monument is at Lord Dartrey's, Ematrix, Co. Monaghan, in a temple on a wooded island in the lake.

XVI (i). QUELLIN.—The Martin Monument (1680) in the Crypt of St. Paul's is undoubtedly his, and there are four statues of children by him in the garden at Carton, Co. Kildare.

XVI (ii).—THE ELDER VAN NOST.—The amusing poem reprinted from "Punch" in the "Architect" for October 20 refers, it is worth noting, to this sculptor's statue of George I in Leicester Square.

XVII (iii). THE YOUNGER VAN NOST is exhaustively treated by Mr. Strickland in his "Dictionary of Irish Artists," to which, as well as to my less complete article, students would do well to refer. I regret that I did not know it before I wrote.

(iv) LAURENT DELVAUX.—It is clear that Scheemaker and Delvaux worked in partnership, since Vertue possessed a catalogue of their joint Sale in 1740. It was in that year, therefore, that he probably returned to Flanders.

XVIII (v). CARPENTIER.—A signed statue of Queen Anne, formerly on the Moot Hall at Leeds, is an important omission from our list of monuments; its date, 1712, makes it his earliest known work. A noble tomb to Sir John Spencer (ob. 1699) at Offley, Herts, may be earlier, but its style so forcibly recalls the Chandos Monument of 1735-7 that it is probably of much the same date. The kneeling figure of the mother, the recumbent figure of the son in classic dress and periwig, make the identification of the sculptor a matter of certainty.

XVIII (vi).—The Gosfield Monument is not Guelfi's, but Rysbrack's, according to Vertue.

XIX.—An important work by Banks at Summerhill House, Co. Meath, was, Mr. Strickland tells me, destroyed at the burning of the house early in the present year. It represented the Hon. Mary Pakenham kneeling in prayer, her dog beside her, on a pedestal adorned with four panels of Scriptural subjects, and was erected by her grandfather, the Hon. Hercules Langford Rowley, in 1791. I have also to thank Mr. A. T. Bolton, F.S.A., for drawing my attention to a tenth work by Banks at the Soane, a cast or model of the Thetis and Achilles.

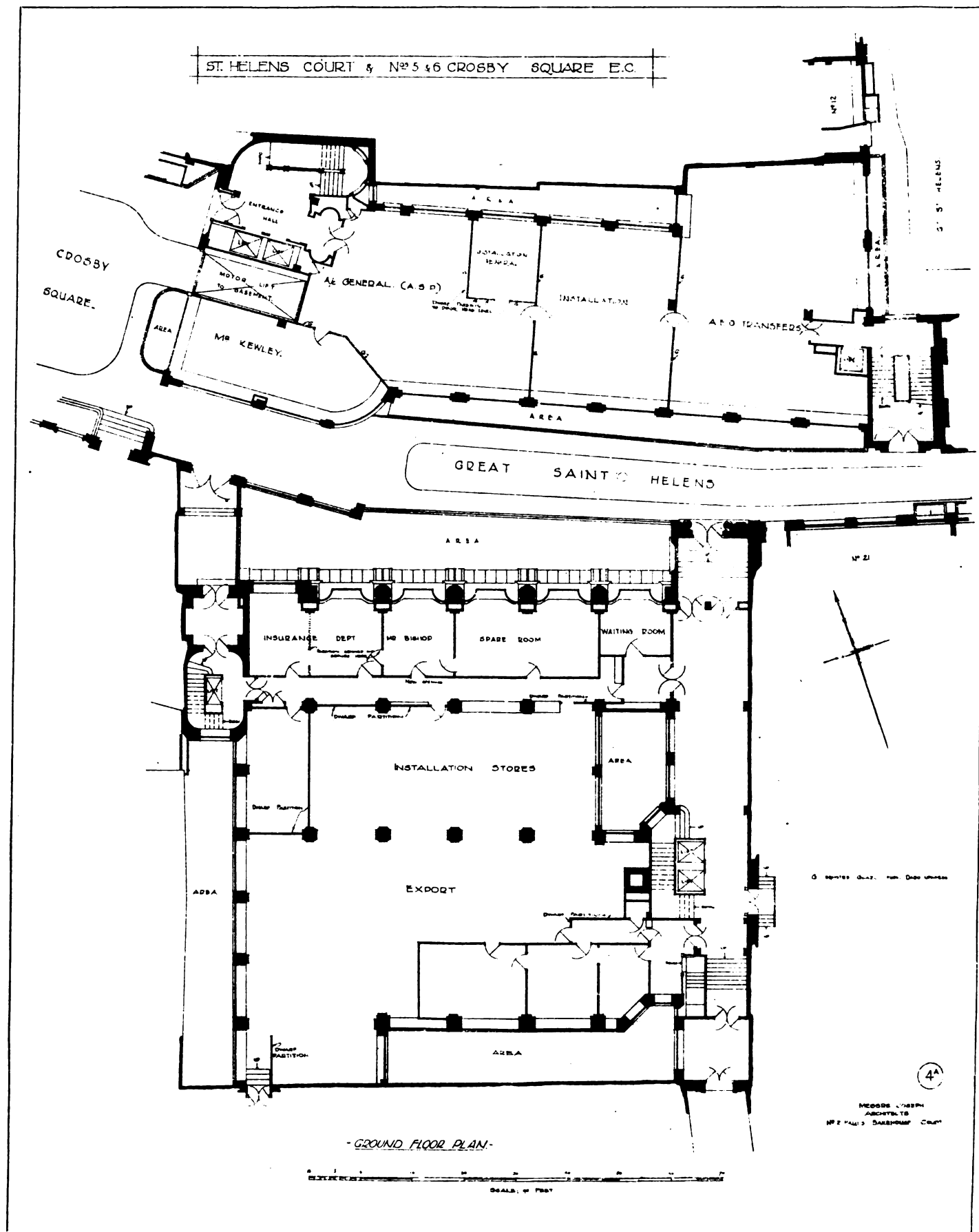
XX.—Bacon's monument to Speaker Cust (ob. 1770) and his wife is in St. George's, Stamford, not St. John's, and is signed and dated 1797.

XXI. Carlini also competed for the Wolfe cenotaph; and a papier maché model of his Dr. Ward belonged to Nollekens. He also made two fine figure candlesticks "in a broad and masterly style" for Rysbrack's patron, Charles Rogers.

Yours, etc.,

K. A. E.

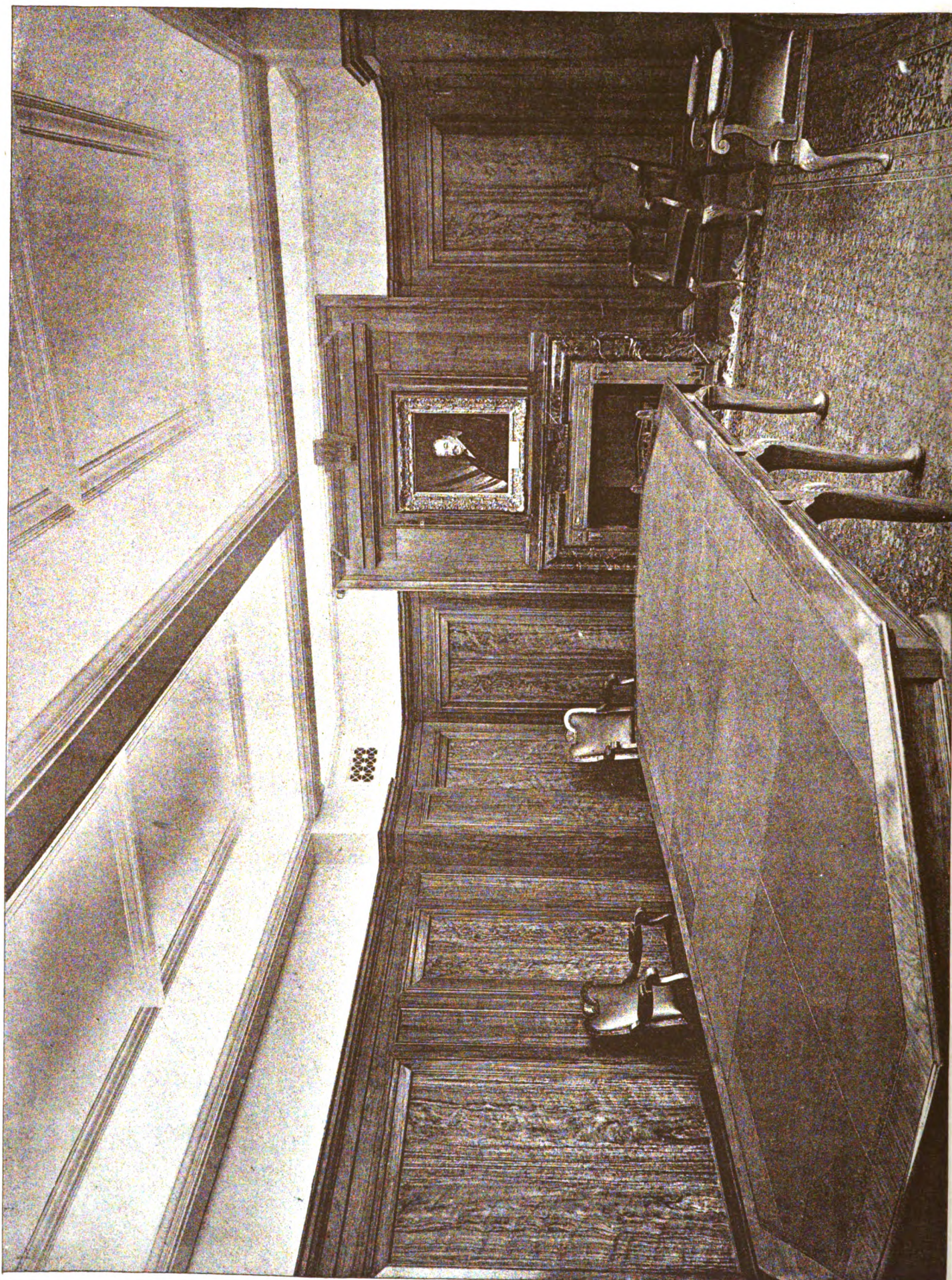
The King and Queen recently visited Westminster Hall and inspected the reconstruction of the roof, which has now reached an advanced stage towards completion. Their Majesties arrived shortly after 11.30 a.m., and remained a little over an hour. They were received by Sir John Baird, First Commissioner of Works, Sir Lionel Earle, Secretary to the Office of Works, and Sir Frank Baines, Director of Works, and were conducted over the building.



GROUND FLOOR PLAN.

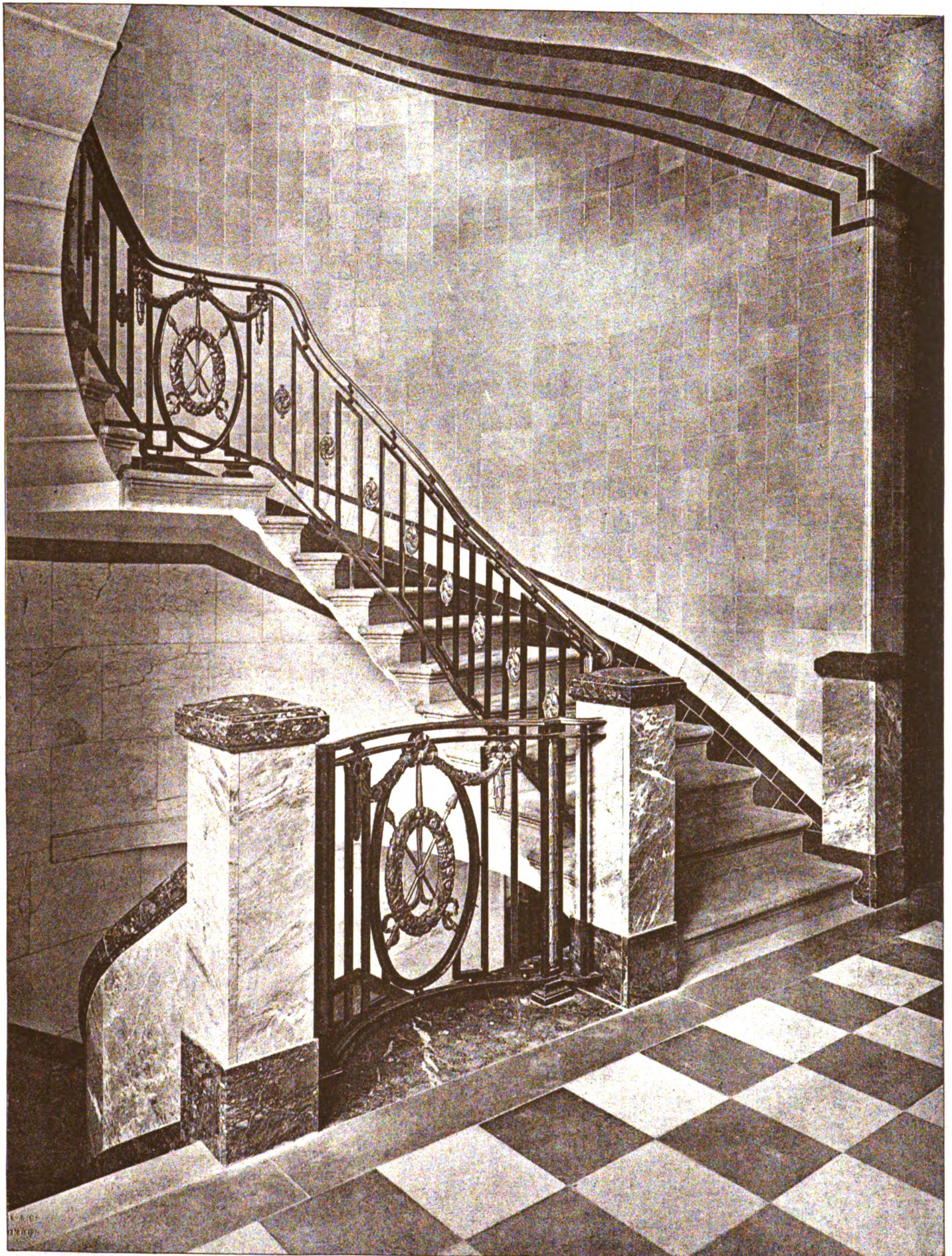
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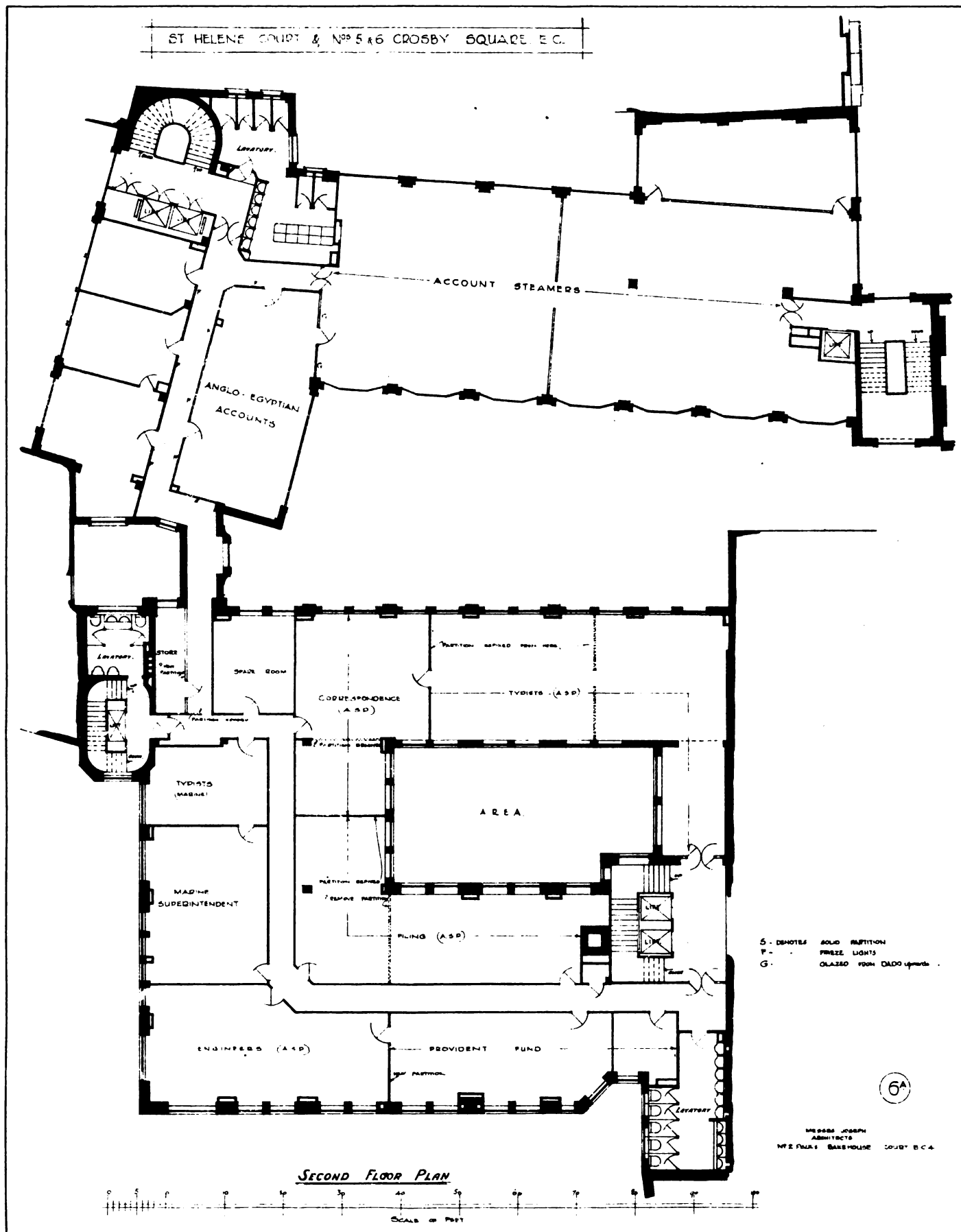
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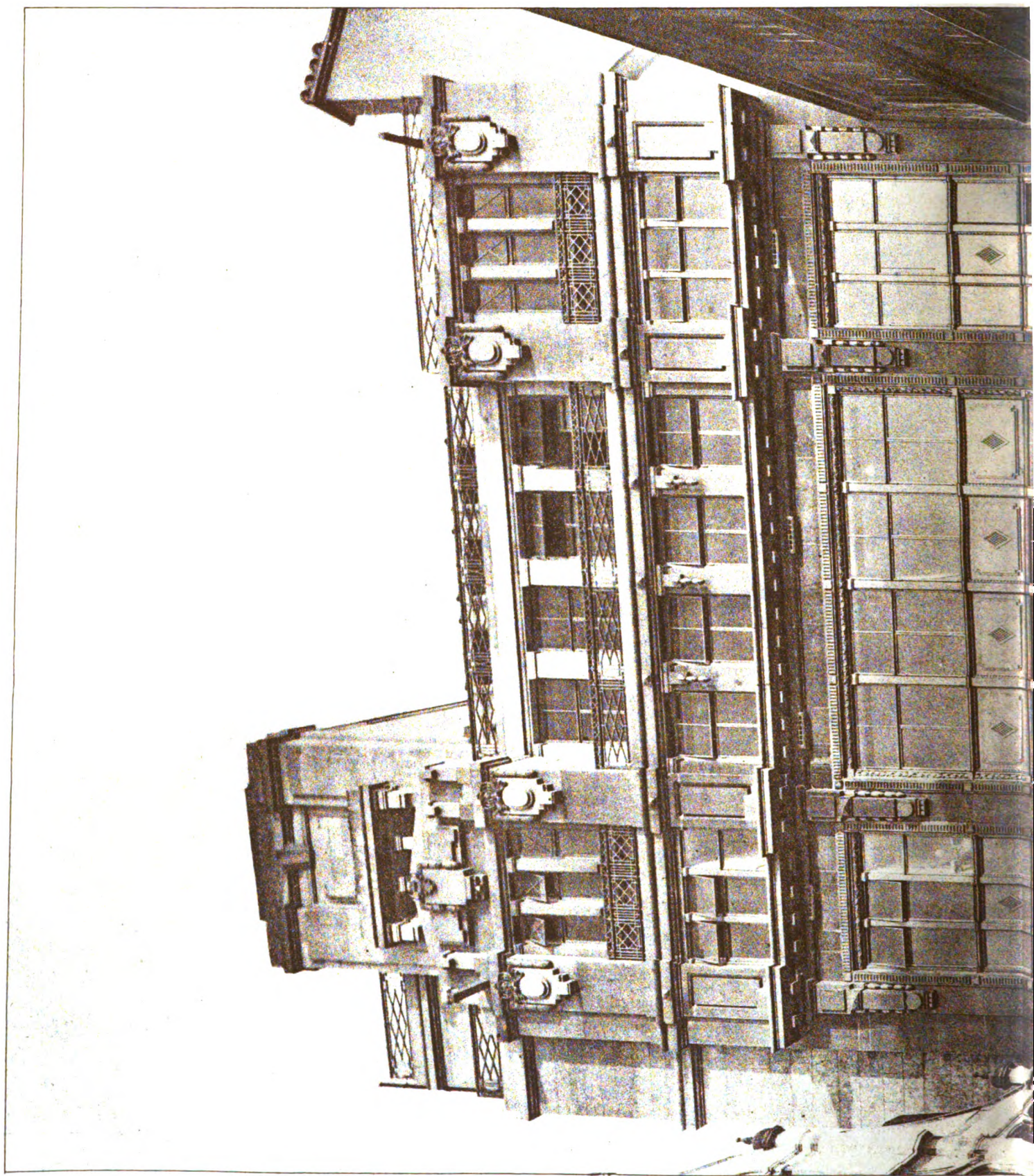


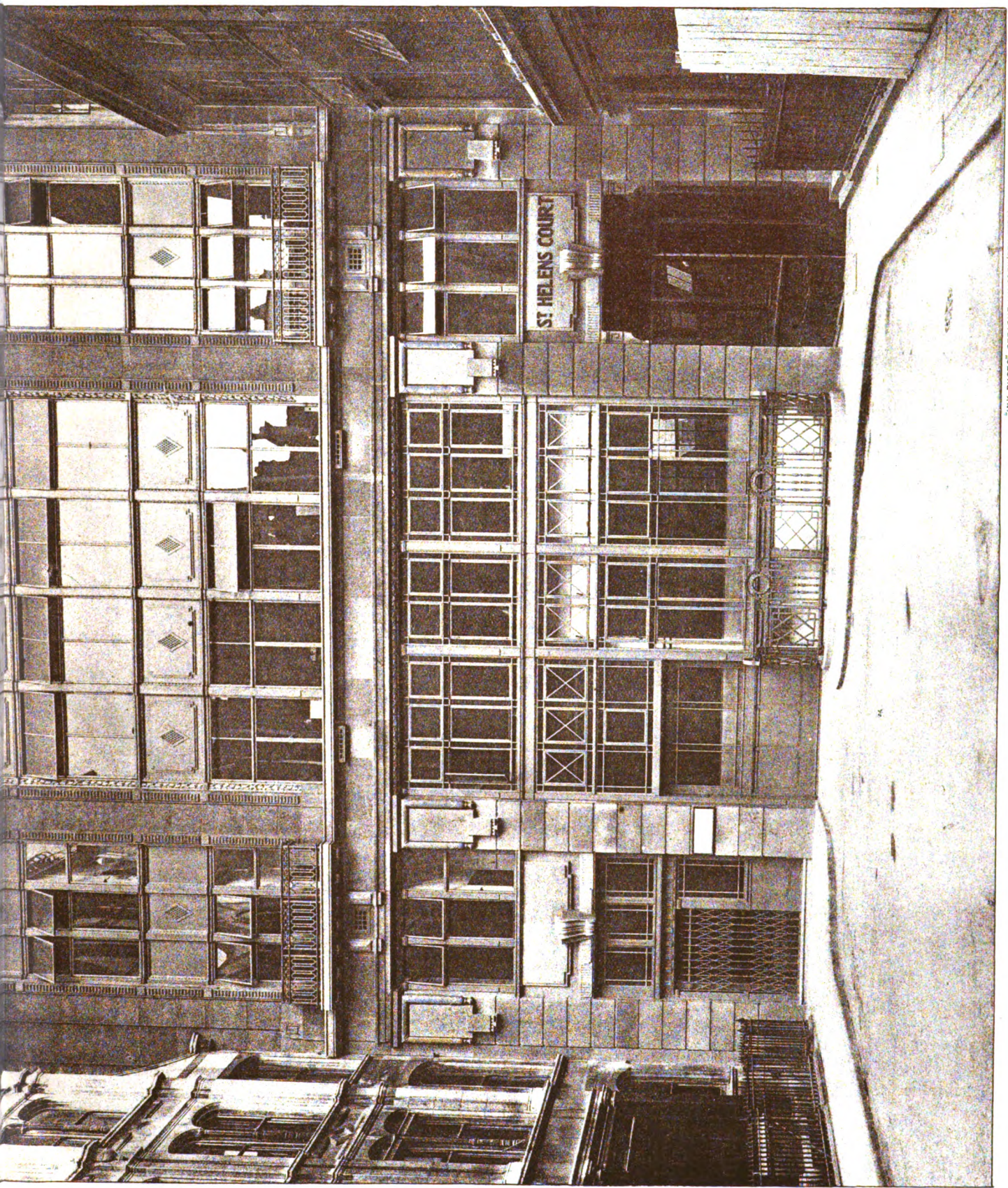
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Developments in Manufacture of Safes and Strongrooms.

By Emory Chubb, M.I.Mech.E.

At a meeting of the Royal Society of Arts a paper, illustrated by many lantern slides, was read by Mr. Emory Chubb, one of the managing directors of Chubb & Son's Lock and Safe Co., Ltd. The occasion was one of peculiar interest, as both the grandfather and father of the lecturer had addressed the Society within the last seventy years on the same subject. In the more recent paper given by the late Mr. H. W. Chubb considerable attention was given to the early growth and development of the art of lockmaking, but Mr. Emory Chubb devoted the greater part of his remarks to the more modern aspect of this question of security. After explaining certain factors which influence design, he showed a film to demonstrate the practical and detailed construction of what he believed to be two of the finest security units yet built in this country. In order, however, to better realise developments which have taken place, a short reference was made to the art and craft of the mediæval locksmith and safemaker.

Under the influence of modern development the twentieth-century key has become an object of utility rather than a thing of beauty. "The worker," said the lecturer, "is being affected in this as in many other trades where art has almost entirely disappeared, and the craftsman, in the old and accepted interpretation of the word, is being replaced by modern machinery and manufacturing methods. From many points of view this change is to be regretted, and it is the duty of the employer imperceptibly to guide the intelligence of his men in such a way that, in spite of having withdrawn much incentive to individual originality and thought, he does not convert them into human machines. Fortunately, in this trade there will always be employment for the highly skilled workman, as there are certain operations where even the greatest mechanical accuracy is finally dependent on the skill of the fitter to piece the work together."

In mediæval times the progress of art metal work was largely exemplified in locks and keys and what are called finger plates for doors. In certain instances the lockplates became fan-shaped owing to the employment of long springs in their mechanism, and here we see the influence of utility or necessity reflected in the art of the period. Some lockplates had most elaborate designs, a very favourite one being a conventional tree or vine shaped in such a manner that the branches converged on the keyhole and acted as a guide to the key for use at night time, or when for other reasons it might be difficult to find the keyhole. One of the most noted locksmiths was a Frenchman named Mathurin Jousse, who lived in 1627, but, as with celebrated painters, much of the work ascribed to him was probably carried out under his directions by apprentices.

The position in which we now find ourselves has largely been evolved through the progress of metallurgical science, which has made very rapid strides during the last twenty years. An indirect result of the war has been to spread a knowledge of the use of explosives and concentrated heat in many quarters where previously their powers were unappreciated.

No secrets are given away with the statement that attacks made with the help of jemmies, wedges and drills are out of date so far as modern security work is concerned, as perusal of the daily papers will often show. Three patterns of safes are in the greatest demand for ordinary purposes.

The first public demand is, and probably always will be, for safes and cupboards which will preserve their contents against fire. The essentials in a safe of this purpose are that it should be of a sufficiently rigid construction to resist fall, and that its walls, of some four inches in thickness, should be packed in such a way that they will resist the action of heat when embedded in glowing embers or hot debris for a considerable period. Apart from the walls, it is most important that the door should fit into its surrounding frame in such a way that all ingress of heat from without is effectively shut off. Fire-resisting cupboards, as distinct from safes, are often built of a ferro-concrete construction.

The next class of safe is one that is sold by all makers to combat the risk of fire as well as that of the burglar, and is in general use throughout the country. This design is often founded on that of the fire-resisting safe, but its plates are thicker and armour-plate protects the locks to prevent the action of the drill. Certain appliances are fitted to the inside of the door so that if the locks are removed by any means the main bolts are automatically secured in the closed position. These safes are eminently adapted for certain purposes; but just as too much should not be demanded of an automobile of low horsepower, so it is equally important that this class of safe should not be overloaded with contents of a very valuable nature.

The third class of safe is of the greatest interest, for the reason

that so much is demanded of it. It is a safe which is built to stand alone, unprotected and unguarded for various lengths of time. Large numbers of this type have been constructed on the understanding that they can be left, fully loaded, over a week-end. It is built to resist both the use of liquid explosives as well as that of the cutting flame, whether generated by gas or electricity. The principle on which these A.B.P. (Anti-Blow-pipe) safes are built is that the actual strength of the safe, in which the owner places his confidence, shall be the last thing to be attacked in the event of an effort to break in. The majority of safes in existence are built with the strongest plate outside, which on account of its exposed position can be the more easily attacked. Messrs. Chubb have reversed this design, and are now building their heaviest safes with the strongest plates inside; thus the outer plate changes its position and becomes the inner line of defence. The advantages of this design are obvious, for as the attack proceeds so the difficulties increase, the burglar's area for operation diminishes and his field of vision becomes less. Suppose his intention is to attempt to cut a hole of 4 inches diameter through the internal plate, it would be necessary to commence with a hole of at least 12 inches diameter externally. In safes of this construction the material used for the inside and straight slab is a special alloy which offers the greatest known resistance to the action either of drill or cutting flame. The door is hung on a crane hinge, which is the most effective manner of obtaining an air and watertight fit of the door into its frame. The final movement in closing is to turn the large hand wheel which presses the door bodily inwards, causing an hermetical joint to be made.

On the all-important question of the best way in which strong-rooms should be constructed there is some diversity of opinion, which is perhaps a good sign, but in this question the theory of the designing board should give way to the results of actual test.

Now in all strongroom work the greatest interest centres on the door, because, provided you have good strong walls which are properly designed, the safemaker has to provide for blocking up the one weak spot in the room, which, of course, is the doorway. Here you have a break in your line of defence, and the skill of the safemaker is shown by the manner in which he can arrange to make this good. With regard to the construction of the walls, the principles followed are similar to those adopted in building heavy doors, and consist in placing as many independent obstacles as possible or different lines of defence.

Provided sufficient space be available, the best form consists of an outer wall of hard Staffordshire blue bricks, which protect an armed concrete wall made up to a certain prescription, and reinforced in a scientific manner with hard steel bars. Inside of this should come a complete steel room of a thickness of from 1½ inches to 3 inches of tough steel, armour-plate or unburnable alloy, according to the requirements of the situation.

The merits of this system are great, as, owing to the irregular formation of the steel reinforcement, the burglar, who we will suppose is using the blowpipe flame, is constantly losing touch with the metal he is endeavouring to cut. It is sometimes found impracticable to give up sufficient space to build walls such as described, and which might easily be 3 feet thick. When this happens it is necessary to compress the strength, which, whilst being a more costly business, adds considerably to the inside dimensions of the room.

This compressed strength consists of two independent steel or armour-plate walls, the space between being filled up with the special mixture of armed or reinforced concrete. A strong-room of this type is known as a triple treasury, and, although of less thickness than the former walls described, still offers three lines of defence to be attacked by various means.

Doors suitable for the walls just described are built either circular or rectangular in shape. Until this year most good treasury doors have been built by securing together a number of plates of varying degrees of hardness, and protecting them from the action of the blowpipe flame by various materials.

Now, the ideal door towards which all thoughtful safe designers are working is not one which allows of the exposure of its component plates on which it relies for its principal strength. In their new design Messrs. Chubb have departed from all precedent, and although the lecturer did not claim that the new type of door was perfect, it represented, so far as he was aware, a great advance on anything yet built in this country. The door itself consists of a hollow cast-steel manganese box 2 inches thick all over and about 2 feet deep. Externally this is very accurately machined, so as to ensure that it makes a metal-to-metal joint with its surrounding frame, which is cast in one piece out of the same metal. The interior of this box is filled up to a depth of about 16 inches with the doorplate of armour-plate and unburnable alloy, together with its additional flame-resisting covering. In front of the flame protector and directly behind the 2-inch slab of manganese steel is placed an electric screen, which gives

an alarm on being penetrated by any method. Inside of the doorplate is placed the lock and bolt mechanism. When the smaller wheel on the outside of the door is turned the circular bolts shoot out and are secured behind the frame, which, of course, prevents the door from being pulled open, and the driving mechanism of these bolts is controlled by four keyless combination locks, which can be used either singly or in pairs. This type of lock, from every point of view, is superior to the key lock on security work of this sort. Instead of a keyhole extending from the outside right to the most vital part of the mechanism, there is a steel spindle or propeller, which is itself fortified to resist the action of drill and flame; it is turned to various diameters as it passes through the different layers of material, thus preventing the successful injection of liquid explosives. It is also worthy of note that the locks are not set in a direct line with the spindles, but by an arrangement of gears they assume a position independent of the lines of force which drive them. On the outside of the door is a knob attached to a small dial with numbers 1 to 100, and to withdraw the lock bolt, prior to opening the door, all that is necessary is to turn the knob to any four prearranged numbers between 1 and 100. The variety of possible combinations runs into several millions, and the numbers can be readily changed by the owner in a few minutes.

An additional control is given by the time lock. This consists of a bronze case containing four independent high-quality chronometer movements. When the door is closed at night the time lock is wound and set in such a way that it will not permit of the door being opened, even by those in possession of the combination, until the prearranged hour. This lock was invented as the result of a burglary, when a bank manager disclosed his combination at the point of a revolver, and it is evident that where these locks are used no apprehension need be felt if the combination becomes known or in some cases if keys are stolen.

The crane hinge, which hinge stretches right across from the frame to the centre of the door, is so made to ensure a metal-to-metal fit. By this means the last movement in closing is that of a direct slide inwards, when both the back and front edges of the door move parallel to each other. Thus, to close the door, the first movement is to swing it in the ordinary way until it is within some 3 inches of being closed; at that point the pressure mechanism, which consists of a bar fitted with an eccentric movement at each end, is engaged, and on the large wheel being turned the door is driven bodily home. The steel bolts are next thrown by means of the smaller wheel, and the combination lock knobs are given a half-turn and the door is locked.

The lecture concluded with a film which gave some idea of the work necessary in producing doors of a heavy type. Two doors were put in hand simultaneously, but, owing to the recent engineering strike, the circular door, which, perhaps, offers the most novel features, has not yet been completed. The rectangular door, however, weighing some 15 tons, and of the new design of which the lecturer had spoken, was shown to its completion.

Birmingham University Town Planning Lectures.

Mr. William Haywood, F.R.I.B.A., in the eighth lecture of the Course, dealt with "Ideal Cities."

Ideas of this class are, he said, not new. Even omitting those of the ancient world, we have More and Campanella in the 16th century, Andreae and Swift in the 17th and 18th centuries, Bellamy, Butler and Morris in the 19th, all writing of Utopias.

Robert Owen in 1818 bought 1,200 acres of land and actually began an ideal village, but accomplished little of importance, and in 1848 James S. Buckingham published a remarkable scheme for a small model city which is curiously like that for an imaginary "Christianopolis" published in 1619 by Andreae, except for certain natural differences due to two centuries of change.

Sir Titus Salt carried to completion a notable experiment when he built Saltaire in 1853, but it is with the work of practical idealists like the late Mr. George Cadbury and Lord Leverhulme (whose ideas materialised in 1887-8) that we get the first practical results of earlier speculations and trials carried to a really convincing conclusion.

This is especially true of Bourneville, which avoids the somewhat institutional character of Port Sunlight, and displays the free and untrammelled conditions under which it was conceived, conditions happily embodied in the design of the buildings and in the method of their arrangement.

These and similar "Garden Suburbs" are often described as "Garden Cities" or as of a "Garden City" character, but it is important to remember that such suburbs are essentially

unlike the fully detached and self-sustaining town of Letchworth, or that of Welwyn now building, to which communities alone the term "Garden City" is properly applied.

The Letchworth type of town differs from all others, by its adoption of Mr. Ebenezer Howard's teaching: (1) That all communities should own the land upon which they stand, in order to avoid the exploitation of land values; (2) That the size of a city should be strictly limited to something under 50,000 (Letchworth is to be 30,000); and (3) that it should be surrounded in perpetuity by a belt of agricultural land for health purposes, and for the mutual convenience of the grower and buyer of market produce. Letchworth, which was commenced in 1903, makes no special contribution to town planning knowledge, but in policy and administration it is unique as the first experiment in a new form of town control.

The ninth lecture dealt with "Municipal Recreation."

The Town Plan, said Mr. Haywood, is a complex of highly specialised sub-divisions, of which the systematic provision of recreative areas is not the least in importance.

For more than thirty years this aspect of civic improvement has been developed in the United States, where "Park Systems" have been made a groundwork for schemes of municipal recreation designed to bring physical and mental fitness to every member of the community, not only during childhood and adolescence, but continuously throughout the life of every citizen.

Recreation on this scale makes a demand upon the Town plan which will be better understood from analysis of a typical "Park System." This consists of: (1) Park Reservations on the borders of the city (comparable with the Lickey Hills or Sutton Park, near Birmingham); (2) Parks of 60 to 200 acres in the suburbs of the town; (3) Parkways or boulevards of from 120 to 400 feet wide which link the parks together, and which, although traffic routes, are given a park-like character; (4) Neighbourhood centres, if possible at one mile intervals, each with an area of from ten to twenty acres; and (5) Children's playgrounds (which may be as small as two acres) at half mile intervals.

The Neighbourhood centres referred to are used intensively. Workers during the day are accommodated by an elaborate system of artificial lighting which permits all but the larger ball games to be played at night, so that the equipment available is often used consecutively for fourteen hours each day.

In the development and administration of these games areas, the fundamental point of view is, that Park facilities should be brought to the people, and not people to the Parks, also that school accommodation should be utilised to its limit (as at Gary, U.S.) and that the development of the "System" should progress with the growth of the city.

The cost of such Systems is usually met by a "Betterment Levy," a method of assessment on property which has been improved in value by association with parks and boulevards. This method is much used in America, and is generally agreed to be mutually advantageous to the parties concerned.

American experience emphasises the need for laying down comprehensive recreation schemes when Town plans are in hand; for basing Park allocation upon a well considered system of use; and for bringing them into the urban structure as elements of beauty, inseparable from a complete expression of civic life.

In the tenth lecture Mr. Haywood discussed "Town Planning and Public Opinion."

Town development tends, said the lecturer, to foster civic consciousness, but where the reverse of this obtains, and consciousness is precedent, better results in Town development will usually be achieved.

Where initiative lies with the local authority, as in England, the support of a keenly interested public will obviously add great strength to Municipal enterprise, and on the sociological side the value of private effort is still more obvious.

Communities in other countries show more civic activity than we have yet exhibited. Dusseldorf is an example of great civic progress made largely upon the initiative of business men. Chicago is the best illustration of civic enterprise inspired by a community.

America has passed no Town Planning Act which resembles the English model, and she remains of opinion that the work is best dealt with in its early stages by private effort. The City Plan (in its widest sense) is regarded as a business proposition, and best developed under the direction and control of business people. Political administration, whether by the City or the State, is felt to be subject to too frequent a change of *personnel* and policy, conditions which are largely discounted where the public itself can be brought to demand reforms with which they have been made familiar, and which have been effectively worked up to the point of acceptance.



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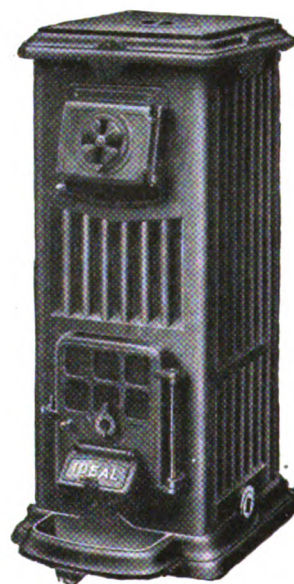
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General.

Mr. T. R. Milburn, F.R.I.B.A., has been elected president of the Sunderland Operatic Society.

Messrs. Forsyth and Maule, F.F.R.I.B.A., have removed their offices from 309 Oxford Street to 12 Stratford Place, W.1.

The death occurred suddenly on the 14th inst. of Mr. Spencer William Grant, A.R.I.B.A., of Staines, and 31 Craven Street, Strand, W.C., aged sixty-six.

Formal notice has been given that a Roman Catholic public elementary school is to be erected at Ardwick Green, Manchester, to accommodate 400 boys.

The Newport Corporation have been strongly recommended by their Public Libraries Committee to open negotiations with Lord Tredegar for acquiring Newport Castle for a museum and art gallery.

The will of the late Mr. James Crocker, F.R.I.B.A., of Exeter, who died on October 18, has been proved at £7,902, and that of Mr. S. Slingsby Stallwood, F.S.A., of Reading, Diocesan Surveyor for Oxfordshire, at £29,316.

The Bristol Corporation have agreed to the reconstruction of one of the sheds at Canons' March at a cost of £60,000. At the same meeting a recommendation to erect forty-eight dwellings at Lawford's Gate was adopted.

London University Senate have accepted an offer from the Council of the Society of Antiquaries to continue the Franks Studentship in Archaeology, of the value of £100 per annum, for a further period of five years.

The Newport (Mon.) Corporation, on the 12th inst., accepted tenders of the Unit Constructional Co., Ltd., for the construction of the pipe line from Talybont to Newport, and a further reservoir at Llantarnam, at the sum of £149,378 17s. 1d.

The Ministry of Health have sanctioned a loan of £55,000 for the purpose of constructing a large outfall sewer along the beach to Copt Point, Folkestone, where it discharges into the sea. The engineers are Messrs. W. H. Radford and Son, of Nottingham.

A petition for the winding-up of the Furniture and Furnishing Guild, Ltd., has been presented to the Manchester County Court by the Express Co-operative Printing Co., Ltd., Blackfriars Street, Salford. The petition will be heard before the Court on Monday, January 8, 1923, at 10.15 a.m.

It was stated at the monthly meeting of the Derbyshire Education Committee, held at Derby, that an application was being made to the Board of Education for sanction to the expenditure of £107,000 on a building programme, which includes seven new schools, as well as alterations to various elementary and higher grade schools and grounds.

Mr. Clough Williams-Ellis has been appointed architect to the Stowe School Governing Body, which includes Lord Gisborough (chairman), Field-Marshal Sir William Robertson and Dr. David (late headmaster of Rugby), the Bishop of Ipswich. A committee of ladies that includes Mrs. C. S. Peel, the domestic economy expert, is co-operating with the architect in the equipment of the kitchen and offices.

Aberdeen Town Council last week accepted the following tenders in connection with the construction of the section of the waterworks aqueduct from West Cults to Pitfodels:—Messrs. T. Piggott & Co., Birmingham, for supplying steel pipes, £22,113 11s. 8d., and Messrs. The Stanton Iron Co., Nottingham, to supply the special castings, £2,109 16s. 6d.; Unit Construction Co., London, for laying the pipes, £23,730 9s. 10d.

Building has been active in Toronto, Ontario, Canada, during the present year. During the ten months ended October, building permits represented a total of over £6,000,000, this being a record for Toronto. Over 4,000 brick residences were built or permits for their construction issued during that period, these representing about half of the entire construction work. Permits for the construction of no fewer than 3,205 garages were issued during the ten months.

The long-drawn-out divergence of opinion at Doncaster regarding the site for the proposed Infirmary bids to become settled shortly. At a meeting of the Governors on the 11th inst. it was agreed that an expert, to be nominated by the President of the Surveyors' Institution, be called in to report as to the relative merits of the two sites in dispute—the hall bequeathed by the late Miss Beckett Denison, or the Infirmary Committee's suggested site in Thorne Road.

A scheme is on foot in Glasgow for the erection of a general hospital for patients who can afford to pay a moderate sum for treatment. An option on a site of 20 acres at Canniesburn Toll has been secured, plans have been prepared, and estimates

obtained, but the promoters say that the scheme will only be proceeded with when the necessary capital for erection and equipment of the hospital has been subscribed. A sum of about £80,000, it is estimated, would be required for that purpose.

The provision of a new Forth Bridge at Alloa is being discussed by the authorities concerned. A sketch plan of the proposed bridge, along with an estimate of the cost, has been obtained from Sir William Arrol & Co. The site proposed for the bridge is from the Glasshouse Loan, on the North Alloa side of the river, to near the Ferry Inn, on the south side. The length of the bridge, which would have an open span, would be approximately 1,276 ft. between abutments, and the approximate cost £171,000.

In view of the housing shortage the Oldham Town Council on the 20th inst. accepted the offer of the Ministry of Health with reference to the building of more houses. The Government have to provide Oldham with 50 additional houses and the Corporation are to build a further 100 houses. One hundred of these houses will be erected on the Greenacres site and the remaining 50 on the Barrowshaw site. There was a strong feeling at the Council meeting against any more houses being built of the type to be found on the Hollins site.

A big scheme for the clearance of slum areas has been prepared by the Glasgow Corporation Housing Committee for submission to the Scottish Board of Health. The scheme provides for the demolition of about 2,000 insanitary dwellings, and the erection of others to accommodate the dispossessed occupants. The estimated cost is £750,000. An annual deficit of about £20,000 on the scheme is estimated, but the Committee hope to get half of this in Government grants, the balance to be provided by a rate of one-third of a penny per £ from the city assessments.

At a meeting of the Lord Provost's Sub-Committee of Edinburgh Town Council last week letters were read from the Cockburn Association and the Edinburgh Architectural Association suggesting the formation of a civic advisory council or committee to consider matters in regard to the development of the city. While the committee took a favourable view of the suggestion, it was decided to set up an advisory committee to deal with town-planning only. The committee instructed the Town Clerk to submit suggestions as to the composition of the advisory committee.

With the object of speeding up the supply of houses, the Leeds Corporation Improvements Committee have put forward two interesting schemes. Under one of these the private builder is offered cheap plots of land on the Council's housing estates, on condition that he builds houses, and the second scheme is to erect 200 dwellings under recently acquired facilities, and to sell them on easy terms. In connection with the first scheme there is an offer from Mr. George Monkman, of Leeds, to build 50 workmen's houses at Crossgates, under certain conditions, providing the Corporation sell him the land at £5 a plot. He would subsequently sell or let the houses. The offer has been sent to the Ministry of Health for their approval.

At a meeting of the Scottish National Painters' and Decorators' Joint Council, held in Edinburgh on the 12th inst., the wages and working conditions throughout Scotland for the year ending December 31, 1923, were adjusted. A flat reduction in the wages of 2½d. per hour and 2s. in the country money, to take effect as from January 1, 1923, was agreed upon. The wages in Glasgow and district for 1923 will accordingly be 1s. 6½d. per hour. Taking into account the reduction of 3d. per hour on July 1, 1921, and the 4d. as at January 1, 1922, and the 2½d. as at January 1 next, the wages in the painting trade in Scotland will have fallen to the extent of 3s. 10d. per week and country allowance by 8s. per week. The reduced costs, it is hoped, will have the effect of releasing work which is meantime being held up.

The Executive Committee of the Lord Lister Memorial Fund unanimously resolved, at a meeting held last week in the City Chambers, Glasgow, to accept a design submitted to them by Mr. G. H. Paulin, A.R.S.A., for the erection of a statue to the great surgeon in Kelvingrove Park. An application will be made to the Corporation to provide for the Lister Statue a site adjacent to the statue of Lord Kelvin. It is expected that the statue will be erected within the next year. The accepted model shows Lord Lister seated and in his academic gown. Mr. Paulin, the designer of the statue, is the son of a former minister of Muckhart, in Perthshire. After a course in Edinburgh Art School, he visited Paris and Italy, studying in various schools. He spent four years in Florence. Subsequently he settled in Glasgow. Among recent commissions given to him were war memorials for Kirkeudbright, Denny, and Dollar Academy.

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